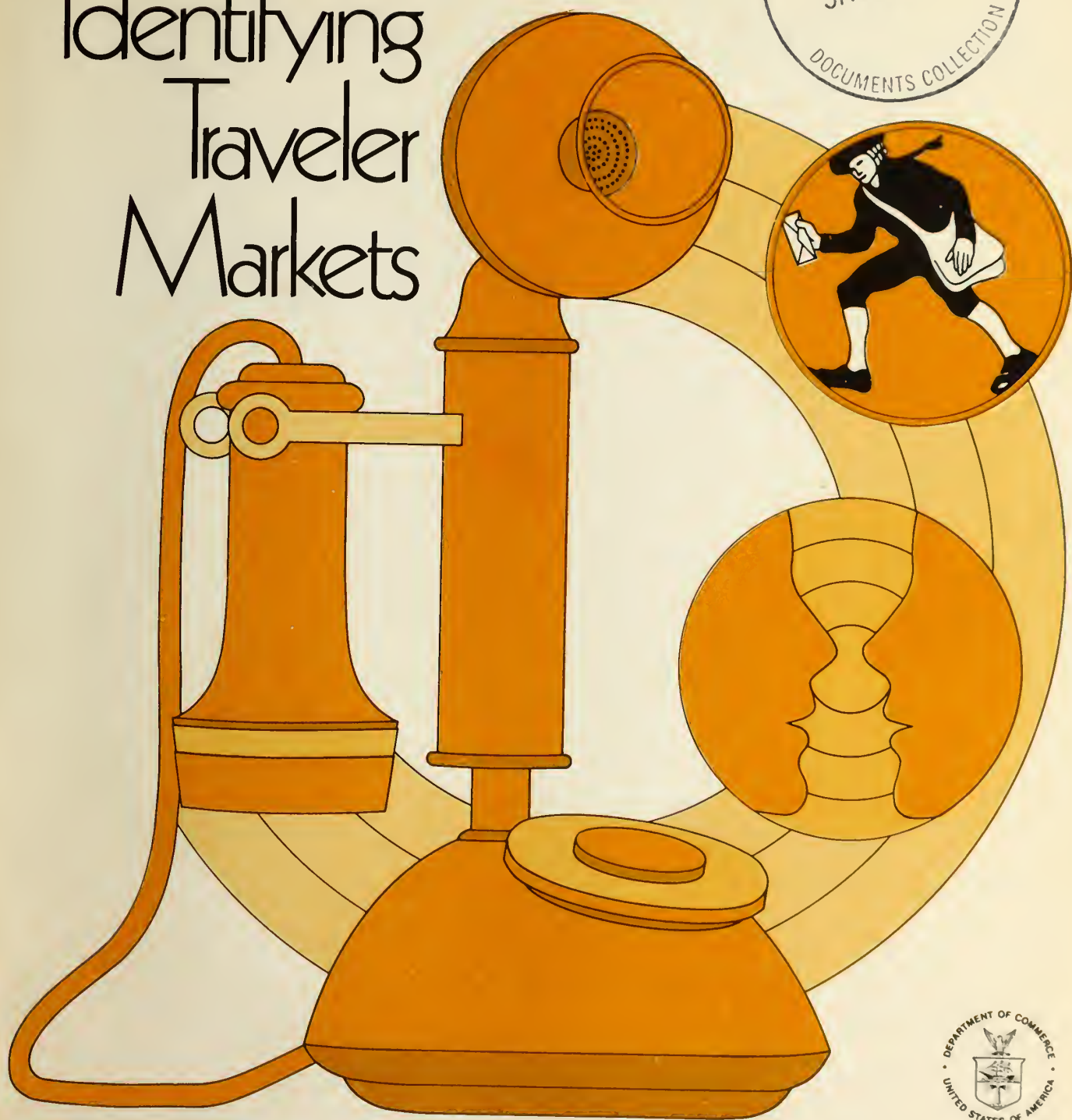


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# Identifying Traveler Markets



RESEARCH METHODOLOGIES

U.S. DEPARTMENT OF COMMERCE  
United States Travel Service



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# Identifying Traveler Markets RESEARCH METHODOLOGIES

Prepared by  
Belden Associates for the  
United States Travel Service,  
U.S. Department of Commerce.

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# PREFACE

The purpose of this report is to provide guidance to regions, states, and cities in developing and conducting travel research studies. The manual focuses on the research techniques involved in the collection of data which can be used as a basis for tourism marketing programs which contribute to the overall economic goal for the area. Part 2 of the manual provides a summary report of the 1977 Washington non-resident air travel survey that was conducted in conjunction with the development of these guidelines.

The demonstration project shows how primary research can be used to provide marketing information.

The study on which this manual is based was conducted by Belden Associates (Dallas, Texas) for the United States Travel Service, U.S. Department of Commerce, under the direction of Paul White, assisted by Geoff West. Melissa Perrett edited the manual.

# INTRODUCTION

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For many areas throughout the United States, tourism represents a substantial portion of the economic base. With competition for the travel dollar becoming more and more intense, those involved in the travel industry need to look for ways to increase or maintain their share of the travel market.

Large sums of money are spent each year by state and local segments of the travel industry to promote their specific areas. The marketing strategies used are often based solely on intuition, without benefit of the traveler's point of view. Although the insider's viewpoint may be accurate, it may not necessarily reflect how others see it. Research, when properly conducted, taps this important source of information about the market.

It must be borne in mind that research in and of itself is not the end result. Research only provides the data to help plan more effective marketing strategies.

The need for guidelines and standards for research in the travel industry has been expressed by both government and private industry in travel literature and studies at congressional hearings and at numerous travel conferences including the annual United States Travel Service (USTS) State/City Day's Conference, the Travel Outlook Forum and the Travel Research Association. This manual is designed to address this need and draws upon experience gained in developing travel research studies in Texas for the Texas Tourist Development Agency, tests within Washington State, and other original work that has been done throughout the country, primarily by universities.\*

A review of the published reports indicates that there have been various approaches used in travel research, many successful and others not so successful, ranging

from tightly controlled sampling and rigorous applications of research techniques requiring extensive budgets, to studies done with little control and at a minimal cost.

The methods recommended in this manual fall between the two extremes and represent one approach to maximizing research investment by providing reliable data for decision-making.

While the methods recommended are viewed as cost efficient, a substantial investment is required to complete the project. Possible funding sources include both government agencies and private industry groups who benefit most directly from increased travel and tourism.

Throughout this report, the term "geographic area" or "area" is used because the manual is primarily designed for application by states, cities, counties, and metropolitan areas.

Travel research, in its broadest terms, includes a wide range of factfinding. Some of it requires nothing more than analyzing existing secondary data such as Census data, reports from other states, and nationwide studies of travel habits and expenditures, and then reworking the data into a useful form.

This manual, however, is mainly concerned with "original survey research" or "primary research," the method used when it becomes desirable to go directly to groups of individuals to obtain information firsthand.

Part I of the manual specifically focuses on the research techniques involved in the collection of data which can be used as a basis for tourism marketing programs which contribute to the overall economic goal for the area. Specifically, Chapter 1 of the report

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\* A selected list of references is included at the end of the report.



describes travel research terms, including a *visitor*, *visits* and a *trip*. The second chapter discusses the resources, dollars and persons' efforts, required to undertake travel surveys. Chapter 3 includes a discussion on defining objectives. After objectives are defined, there is a need to review secondary literature. In the event that primary research is needed, information is provided on the methods for developing questionnaires to meet the specific objectives.

Chapters 4 through 9 discuss the technical aspects of conducting a primary research study. Specifically, Chapter 4 provides a discussion of sampling—its purpose, types of sampling, techniques, and problems with certain types of sampling. The discussion on enlisting the cooperation of government agencies and carriers when conducting travel surveys is included in Chapter 5. It provides guidance on whom to contact, what types of information the researcher should give, for example, the airport authorities or highway departments, what types of information the researcher can obtain from these authorities and what types of out-of-pocket expenses might be incurred during the

survey. Chapter 6 provides information on the preparation of field materials, including reporting forms, questionnaires, show cards, and interviewing specifications. Chapter 7, which describes the various aspects of field administration, provides information on interviewer training, sources of interviewers (e.g., independent professional interviewing services, universities, full-time employees), logistics of maximizing productivity, the importance of back-up field staff, and returning completed work. Chapters 8 and 9 discuss quality control and data processing techniques.

The last chapter, Chapter 10, provides a discussion on the analysis and reporting of the data obtained from the survey.

Part 2 of the manual highlights the findings of a 1977 Washington State non-resident air travel study, which was conducted in conjunction with the development of this manual. The survey, which included over 2,500 personal interviews with non-resident air visitors to Washington State, demonstrates how primary research is actually conducted.



# Part 1—RESEARCH METHODOLOGIES

## Chapter I

### DEFINITION OF TRAVEL RESEARCH TERMS

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One of the primary objectives of developing travel and tourism definitions is to provide for comparability in travel research. This will not only improve the quality of research data, but can lead to an increased use of travel research data for the planning and development of investment strategies which integrate travel into the overall economic development efforts of the community and can improve communication among those utilizing this research.

If survey questionnaires are used, the questionnaire design and methodology will depend on the objectives of those conducting the research. However, there are some core questions which can be incorporated in travel survey questionnaires which will make it possible to analyze travel survey results in various but consistent ways. For example, if the question asks where the visitor comes from, subsequent analyses can be based on either a 50- or 100-mile limitation. The data could also be analyzed by individual traveler segments such as convention travelers, in contrast with all other visitors. Similarly, a length of stay question can be asked to distinguish people who are just transiting the area and do not spend the night from those who spend one or more nights in the area.

With respect to current practices involving travel definitions, the U.S. Bureau of Census, which conducts the *National Travel Survey* every five years, and the U.S. Travel Data Center, which publishes the *National Travel Expenditure Study*, use the "100 miles or more" definition. (The U.S. Travel Data Center analysis uses information from the *National Travel Survey* as one of its primary data inputs.) The Bureau of Census uses the "100 miles or more" definition, rather than the "50 miles or more" definition for greater measurement accuracy. Research indicates that the shorter the trip mileage, the greater the difficulty for travelers to recall the number of trips taken.

With respect to current practices involving travel definitions at the state and local level, there appears to be no common practice. Definitions are based on a variety of factors including geographic restrictions, purpose of trip, miles traveled, time away from home, mode of transportation, or a combination of these definitions. The most common methods for collecting the data appear to involve the use of interviewing at attractions and obtaining information at welcome stations. Other methods utilized are entrance/exit surveys which generally involve personal interviews on highways and at airports and sometimes involve the distribution of diary questionnaires for the travelers to complete on their trip in the area.

In February of 1977, the United States Travel Service solicited comments about travel tourism terminology and definitions from 56 states and territories and 130 U. S. cities (City Governments, Convention and Visitors Bureaus, and Chambers of Commerce) in order to determine if preferences for definitions existed among representatives of the public sector of the tourism industry. In total, 75% of the states and 65% of the cities, for a combined total of 68%, responded with comments about travel terminology definitions, and the importance of research and research needs. The general conclusion was that there was little consensus on definitions and terminology. The two most popular definitions for travel and tourism were "people taking trips outside of their home community, excluding daily commuting to and from work," and "people taking trips outside of their home community and staying at least one night away from home." Definitions including some mileage threshold ranked next in popularity, with a 50-mile limitation (one way) being more popular than a 100-mile limitation.

Definitional limitations, such as those discussed

above, may be required depending on the specific research design. However, the following definitions do not require that any specific constraints be imposed.

## **Visitor**

A visitor is defined as any person residing outside the area who enters the area for any purpose other than commuting to work. Place of residence refers in most cases to the geographic place where the persons earn their livelihood. However, sales personnel and other business travelers would be considered visitors. The criterion is an economic one: is the person contributing to the area's economy from outside the economy, or is the individual taking part in local economic activities in a manner similar to that of local residents? On the basis of this definition, students attending school in the area would be excluded.

## **Visit**

One visit corresponds to one visitor or party entering or leaving the area. Length of visit is determined by the time between entrance and departure. Theoretically, a visitor could make several visits (entrances and exits) to the area during one trip.

## **Trip**

Travel by a person away from his residence for any purpose except commuting to work can be considered as a trip. Conceptually, any travel outside a person's home area could be considered a trip; operationally, a minimum travel distance in terms of mileage away from home constitutes a trip.

## **Destination**

The place designated by the person as the destination of his trip. If the person doesn't recognize any one place, as in the case of touring without a specific destination, it may be arbitrarily identified as the furthest point reached or where the most money or time was spent, depending on the objectives of the study.

## **Travel Party**

A group of persons traveling together. In common carriers travel parties would usually be people who consider themselves as traveling together in a unit and whose expenditures and travel decisions are handled largely in common. Travel parties may be families, groups of related individuals, or groups of unrelated individuals.



# Chapter II

## DECIDING IF RESOURCES ARE ADEQUATE

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While there are a number of efficiencies that can be built into the project, primarily through the use of effective sample design, conducting quality primary research surveys can be expensive.

If an all-inclusive study covering highway, air, bus, and train travel has been planned, it may be necessary to phase the work over a period of time, concentrating first on the single mode of travel that is considered to be most important for the market.

In addition to budgeted resources, supplementary funds may be available from governmental sources or private industry organizations, who stand to benefit from additional tourism in the area.

### Costs

Costs, if the study is conducted within the organization, can be divided into *direct out-of-pocket* and *indirect* expenses.

Direct out-of-pocket costs will include actual interviewing expenses and associated costs such as a flagman for the survey crew, mileage allowances, overnight lodging (if necessary), parking, tolls, and meals away from home. These costs will vary widely from area to area, and can be expected to be higher in major metropolitan areas. Reliable field staff services can provide cost estimates that apply in the area. Their costs will usually be stated on an hourly basis, which allows one to determine how many hours of interviewing can be afforded and how the work should be spread out over the survey period.

Field costs, including the actual interviewing, supervisory fees, and other associated costs, will normally run about one-third of the total research budget.

Printing costs (for the various field materials needed, as well as the final report) can also vary widely, depending upon whether the report is printed "in-house" or through the services of a commercial printer. While printing costs are normally a minor part of the total budget, these expenses and other incidentals such as postage and phone bills should be taken into account in forecasting expenditures.

A third type of direct out-of-pocket expense which will probably be incurred is the cost of tabulating the study. Although some tabulation facilities may be available, special computer programs are generally required for tabulating research data. Tabulation alternatives are discussed more fully in Chapter 9 on Data Processing.

Indirect costs involve staff time, and the overhead for such things as space, equipment, taxes, and insurance. While it may be possible to divert the time and energy of some people within an organization to handle part of the research function, many facets of the research process call for highly trained personnel in the areas of sample and questionnaire design, tabulation, and analysis.

One approach may be to evaluate the interests and skills of one's own staff and seek outside help for those parts that are too complex. Another approach may be to contract the entire project out to a commercial research organization.

### Using Professional Researchers

There may be times when the use of a professional research firm is not only desirable, but necessary.

Research organizations are usually listed under

“Marketing Research” in the classified telephone directories of larger cities. However, because many travel research projects involve aspects not normally found in marketing research, the list may not be adequate or complete. Some firms listed may be just interviewing services and others may not have the experience needed. Therefore, the following steps may help in selecting a suitable research firm:

1. Obtain company brochures, a description of experience, specialties of the house, and credentials of the principals.
2. Obtain a list of clients and, if possible, copies of nonconfidential reports produced by the firm.
3. Contact government agencies who have experience in conducting travel research. Most of these types of agencies will have a list of research firms.
4. Contact references, particularly other travel bureaus or organizations previously served by the firm.
5. Insist on a written proposal, including a statement of the problem, objectives, methods, reasons for the methods, what you will receive, cost quotations, and time estimate. Number of inter-

views and length of the questionnaire should be specified.

6. Evaluate the honesty, objectivity, experience, and professional competence of the firm.

The researcher should be provided with a clear statement of the purposes and objectives of the project. If competitive bids are solicited it is a good idea to obtain a minimum of three bids.

Colleges sometimes have excellent researchers in their marketing departments or bureaus of business research who offer their services. Some universities have departments that do travel research on a full-time basis.

Some researchers, commercial or academic, offer counsel aside from conducting entire projects. When a difficult research problem arises, it might well be advantageous to seek their advice. Some organizations will perform only one phase of the work. For instance, it may be desirable to have an expert design the sample or write the questionnaire, or conduct the field work, or do the tabulations. Commonly, it is the interviewing, or field work, that is contracted to a commercial research firm.



# Chapter III

## DEFINING OBJECTIVES

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The first, and most crucial, part of the survey is to define the objectives. Without a definite set of objectives in mind, research may tend to go off in diverse ways and, in the end, may provide a great deal of information, but may not satisfy the major areas of concern.

Survey objectives traditionally fall into the following classifications:

1. Economic impact on the area
2. Guidance in developing tourism marketing programs including visitor characteristics
3. Program evaluation/budget justification
4. Data to respond to industry issues, such as energy conservation

### Identifying the Problem

The first step in defining the objectives is to examine and evaluate the issue or issues for study.

While the objectives can be stated in broad terms, it is better to break them down into smaller sub-parts to better define the issue and provide direction in selecting specific questions that focus on the issue to produce the necessary information.

Before planning questionnaire content, it is important to visualize how each of the facts obtained will interact to answer basic questions and provide solutions to the stated issue.

After the problem has been identified, and the objectives have been defined, the next step is to examine the literature relating to other work that has been done to see what may be applicable to answering the questions. It is vitally important that this step is not

overlooked; if the information is already available, considerable resources can be saved.

Experience indicates that there is a tremendous temptation to look first at different types of specific questions and then “build” the objectives around the questions.

This is exactly the opposite of the proper approach. First come the objectives, and then the questions, or combination of questions, which best fulfill these objectives. Sometimes the best question will be simple and direct; at other times, the approach may require complex questioning techniques, or even a series of questions, to gather the information that is needed.

Included at the end of this chapter are suggested questions that apply to travel research to serve as a starting point once the study’s objectives are defined. The list is not intended to be all-inclusive, and areas for study not identified will require other questions.

The tendency is generally to try to obtain too much, not too little, information from a single interview. Therefore, it is important that one be selective about the questions, considering each one individually on the basis of how it helps provide information relating to the primary objectives.

One method of simplifying the selection process is to give each question a “priority rating” based on its ability to satisfy the study objectives. Some of those with lower priority can be cut if the questionnaire becomes too long. One should not expect to obtain all the information needed about all phases of travel research in a single questionnaire.

This discussion relates to the overview of how ques-

tions should be chosen and directed toward the study's goals and objective. Questionnaire content and construction will be discussed more fully in Chapter 6.

## Questions Used in Travel Research

There are basically three different types of questionnaire content that will need to be included in the study:

1. Screening questions series—used to screen out, or eliminate, respondents who do not qualify as part of the universe.
2. Data measurements—used for providing information designed to meet your study objectives. Examples: expenditure data, place of residence, nights spent in state, lodging accommodations used, attractions visited.
3. Controls—needed for identification purposes: They may appear either as actual questions or information recorded by the interviewer. Examples: basic demographics (e.g., sex, number in party, age), date, flight number.

The following pages include examples of each of the three types of measurements.

### Screening Questions Series

- a. How many persons altogether, including yourself and children, are traveling in your party on this trip?
- b. Are you a resident of (survey area)?
- c. Are you the head of your travel party?

Note: Other non-qualified individuals may be screened out in other measurements.

### Data Measurements

Thinking of this trip, and by this trip I mean since you last entered (survey area), what was the one main purpose of this trip to (survey area)? (Note: In an air survey, for example, in-flight transfers and students would be screened out at this point.)

What are some of the other purposes of this trip to (survey area)?

In what state or country do you presently reside?

What types of transportation did you use traveling in (survey area) on this trip?

What cities or places in (survey area) did you visit or go through on this trip?

Thinking about your visit in (survey area) how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . .?

Food and refreshments?

Recreation and entertainment?

Lodging and accommodations?

Airline, bus, train, boat, rental car transportation fares?

Gasoline, oil, tires, repairs?

Other retail purchases or services?

Anything else?

On this trip, how many nights did you spend in (survey area)?

In what types of lodgings or accommodations did you stay while in (survey area)?

Thinking about your trip as a whole, would you say that you were mostly satisfied or mostly dissatisfied with your trip in (survey area)? (IF UNDECIDED) Well, over-all, would you say you were mostly satisfied or dissatisfied?

Now, I'd like to ask you about what you both liked and disliked about your trip here. First, what, if any, are some of the things you particularly liked about your trip in (survey area)?

And what, if any, are some of the things you disliked about your trip in (survey area)?

What are some of the things you or other people with you did on this trip?

### Controls

Now, let me check, how many did you say are in your travel party?

And how many persons 18 years or older, including yourself, are traveling in your party on this trip?

(SHOW AGE CARD) Please show me into which age group you fall. (IF REFUSED, ESTIMATE AND CIRCLE CODE.)

(SHOW EDUCATION CARD) Please point out the last grade of school you completed.

What is the occupation of the head of your household?

(SHOW INCOME CARD) Will you point out which of these groups best describes the total annual income of your household before taxes.

How many trips away from home have you taken in the past twelve months—that is, since last (month of interview)?

About how many business trips have you made by (mode of travel) during the past twelve months?

About how many pleasure or vacation trips have you made by (mode of travel) during the past twelve months?

AFTER COMPLETING INTERVIEW, BUT BEFORE GOING TO NEXT PERSON, FILL OUT BELOW:

SEX OF RESPONDENT:

DATE:

FLIGHT NUMBER:

INTERVIEWER NUMBER:

# Chapter IV

## SAMPLING

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Generally, primary travel research surveys are based on a “sample,” out of the total or complete number of observations in the universe. There are a number of reasons sampling is used, including the following:

1. It is usually impractical to try to obtain information from every visitor to an area being studied. In most cases the logistics of a complete census would be virtually impossible to arrange.
2. Sampling, when properly conducted, will provide an accurate measure of the entire universe (the group of people you are studying).
3. Using a sample of the total universe is an economic practicality; it reduces the cost of gathering information and tabulating the data.

### Importance of Probability Sampling

Considerable time, effort, and expense goes into developing a good research study. Only by using probability sampling will one be able to obtain results with known accuracy. A non-probability sample is not projectable to the total universe, and, therefore, while it would produce a “sample” of visitors, there would be no way of knowing how much confidence one could have in the results representing the total universe.

There are many approaches that qualify as probability sampling, including certain variations of a simple random sample—such as picking names from a hat. The specific methods used in constructing the sample are not the major consideration; more important is that the sample be based on probability methods and, thus, be projectable to the entire universe.

### Universe

A universe is defined as the total population group under study. For travel research, the universe is generally defined as a geographic area visited, a mode of transportation used, or a combination of the two.

Some examples of definitions of a universe might be “any person who visits anywhere in the state,” or “any person who visits a particular county,” or “any person who visits a specific city, regardless of mode of transportation used.”

Another approach is to define the universe in terms of how people travel—by auto, plane, train, bus or ship. Under some circumstances, the definition of the universe may be a combination of the two, e.g., travelers who visit a specific geographic area by a specific mode of transportation.

One of the primary reasons for using the mode of transportation for defining the universe is that different modes require different sampling techniques.

### Probability Sampling

Probability sampling is defined as a selection based on the principles of chance in which every member of the population being studied (the universe) has a known, usually equal, probability of being selected. It is often referred to as “random” sampling (but technically, a probability sample is seldom a pure random sample).

The “law of large numbers,” rather than subjective judgment, rules the selection of respondents. The procedure takes the decision of who will be interviewed or otherwise counted out of the judgment of the researcher or interviewer.



Probability sampling differs from “quota” sampling, another method that is sometimes used. Quota sampling allows the interviewer to select those individuals who will become part of the sample based upon predefined sets of characteristics, such as sex, age, and place of residence. Quota sampling is often called “judgment” sampling, as it depends on the judgment of the interviewer, at least partially, for the selection of respondents. Statistical measures of reliability cannot be applied to quota samples, since probability is not allowed to exercise its function.

## Examples of Non-Probability Sampling

As explained above, a probability sample, by definition, must provide all units of the universe with a chance of being selected. Unless this condition is met, the sample is *not* a probability sample and, therefore, is not projectable to the total universe.

Each of the following examples provides a universe definition, sampling method, and explanation of why the given survey specifications fail to qualify as a “probability” sample.

1. *Universe*—persons visiting the state by auto.  
*Method*—random selection of cars stopping at an official information station.  
*Explanation*—those who do not stop have no chance of being selected as part of the sample. Regardless of how meticulous one is in selecting those to be interviewed, the sample cannot represent those who did not stop. Of course, one might speculate on the differences between those who stop and those who don’t in terms of length of stay, expenditures, party size, reasons for the visit, and so on, but the speculations could not be substantiated by actual data.

The sample described above, however, could be termed a probability sample if the universe were redefined to consist of visitors who stop at the information station.

2. *Universe*—persons visiting the state by any means of transportation.  
*Method*—random selection of people who stay at hotels, motels, or patronize a selection of restaurants.  
*Explanation*—While it is possible to contact vis-

itors who travel by all different modes of transportation, this approach has the same limitation as cited above; those who visit the area without staying overnight, or pass through without eating at a restaurant, would have no chance of being included.

Based on the definition of the universe, these people need to be counted.

3. *Universe*—persons visiting the state by any means of transportation.  
*Method*—intercepting people at a fair wherever they can be spotted.  
*Explanation*—“wherever they can be spotted” is the key phrase; there must be some predefined random procedure for selecting respondents. This method, of course, also suffers from the same limitations as those mentioned above—those who do not visit the fair have no way of being selected.

## Problems with Site-Specific Sampling

Site-specific sampling, or conducting interviews at such places as popular tourist attractions, highway information stations, or convention centers, has often been used to provide information about tourism and travel within a state. The popularity of this method seems to stem from its convenience for the researcher; large numbers of out-of-state visitors are readily available, in a relaxed atmosphere, and are temporarily immobilized and easy to interview.

This type of sampling, however, has major drawbacks:

1. Regardless of how well the sample is designed, it cannot be representative of total visitors because those who do not stop at the interviewing sites will never have a chance to be included.
2. The characteristics of persons who are in the habit of visiting major attractions within the state, or stopping at highway information booths, may be totally different from the average visitor’s. Parks would tend to attract a larger proportion of campers; sports events, the sports enthusiast; national monuments, the sightseer; and industrial and business centers,

the businessman. Much of the information obtained and the conclusions drawn would be dependent upon the type of attraction selected as an interviewing site. One might speculate that those who stop at highway information centers, for example, would tend to be biased toward "first time" visitors, those who plan to stay for a longer period of time, and those who are visiting for vacation or pleasure.

3. Location is also an important factor—the site selected must be one that is easily accessible to all visitors.
4. Visitors may travel to other parts of the state *after* they are interviewed, even though they had not planned to, and their attitudes and opinions may change as a result of their subsequent travel experiences.

Additionally, expenditure data will be incomplete until the end of the trip.

## Sample Sizes

First, it is important to remember that, as a practical matter, travel research will be based on a *sample* of visitors rather than a complete census of all visitors to the area.

Consequently, there are some inherent limitations that apply to samples of visitors, just as they apply to any type of sampling. This is not to downplay the importance of sampling in research—samples can, and do, provide a great wealth of information, with considerable accuracy, when properly designed and implemented.

All samples, by their nature, are subject to what is known as *sampling tolerances*. What this means, simply stated, is that the survey findings may vary slightly from the results that a complete census of the universe would have produced. This so-called sampling "error" does not imply that a mistake has been made; it simply means that since a sample could slightly understate or overstate actual conditions, one should take the tolerances into consideration when interpreting survey results.

From a practical standpoint, the "error" that might be expected from sampling tolerance alone is not one of major concern; few decisions rest on a difference of a few percentage points one way or the other. Only by using probability sampling methods is it possible to

calculate—and to estimate—the range of a few percentage points that would contain the real result if a complete census had been taken. The degree of accuracy is largely a function of sample size—the bigger the sample, the more accurate one can be.

A popular misconception is that the larger the universe or population to be sampled, the larger the sample required. The scientific fact is that for most sampling problems, the size of the sample operates independently of the universe; that is, a sample of 1,000, say, will be just as good for a national survey as for a state survey. There are other considerations, such as dispersion of the respondents, that might enter into sample size determination, but the foregoing is the basic principle.

A second factor that affects reliability in the case of a binomial, or two category universe (e.g., male and female, or yes or no questions), is the degree to which the percentage of a category deviates from either extreme, i.e., from either zero percent or 100 percent. Using the same sample size, accuracy increases the closer the result comes to zero or 100 percent; accuracy diminishes the closer the result gets to 50 percent. In determining sample size, the safe thing to do is to assume results will be at the most critical level, 50 percent, and conduct enough interviews to provide the desired accuracy.

Normally, the sample design used in the project will employ a number of special features to achieve economies in administration, and the extent to which these are used will have a slight bearing on the tolerances you might expect from sampling. However, the table on page 11, which is based on simple random sampling without the special features, indicates the sampling tolerances that are possible from various sizes of samples.

Another important factor to note in determining sample size is how the total sample is to be divided in order to analyze certain types of respondents. Thus, all vitally important sub-groups should be represented within the total sample by sufficient number of interviews to provide a reliable base. This is necessary because the degree of accuracy largely depends on the sample size of the sub-group under investigation, not the size of the total sample.

Therefore, if it is known (either from available data or from intuition) that a specific subgroup comprises only a small portion of the total universe, such as visitors from a certain state, then a much larger total



Sampling Tolerance Table

TOLERANCES (PLUS OR MINUS) OF SURVEY RESULTS DUE TO SIZE OF SAMPLE

When Survey Result Is → And Sample Size Is ↓	1% or 99%	2% or 98%	3% or 97%	4% or 96%	5% or 95%	6% or 94%	8% or 92%	10% or 90%	12% or 88%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	45% or 55%	50%
25	4.0	5.6	6.8	7.8	8.7	9.5	10.8	12.0	13.0	14.3	16.0	17.3	18.3	19.1	19.6	19.8	20.0
50	2.8	4.0	4.9	5.6	6.2	6.8	7.7	8.5	9.2	10.1	11.4	12.3	13.0	13.5	13.9	14.1	14.2
75	2.3	3.2	3.9	4.5	5.0	5.5	6.2	6.9	7.5	8.2	9.2	10.0	10.5	11.0	11.3	11.4	11.5
100	2.0	2.8	3.4	3.9	4.4	4.8	5.4	6.0	6.5	7.1	8.0	8.7	9.2	9.5	9.8	9.9	10.0
150	1.6	2.3	2.8	3.2	3.6	3.9	4.4	4.9	5.3	5.9	6.6	7.1	7.5	7.8	8.0	8.1	8.2
200	1.4	2.0	2.4	2.8	3.1	3.4	3.8	4.3	4.6	5.1	5.7	6.1	6.5	6.8	7.0	7.0	7.1
250	1.2	1.8	2.2	2.5	2.7	3.0	3.4	3.8	4.1	4.5	5.0	5.5	5.8	6.0	6.2	6.2	6.3
300	1.1	1.6	2.0	2.3	2.5	2.8	3.1	3.5	3.8	4.1	4.6	5.0	5.3	5.5	5.7	5.8	5.8
400	.99	1.4	1.7	2.0	2.2	2.4	2.7	3.0	3.3	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
500	.89	1.3	1.5	1.8	2.0	2.1	2.4	2.7	2.9	3.2	3.6	3.9	4.1	4.3	4.4	4.5	4.5
600	.81	1.1	1.4	1.6	1.8	2.0	2.2	2.5	2.7	2.9	3.3	3.6	3.8	3.9	4.0	4.1	4.1
800	.69	.98	1.2	1.4	1.5	1.7	1.9	2.1	2.3	2.5	2.8	3.0	3.2	3.3	3.4	3.5	3.5
1,000	.63	.90	1.1	1.3	1.4	1.5	1.7	1.9	2.1	2.3	2.6	2.8	2.9	3.1	3.1	3.2	3.2
1,200	.57	.81	.99	1.1	1.3	1.4	1.6	1.7	1.9	2.1	2.3	2.5	2.7	2.8	2.8	2.9	2.9
1,500	.51	.73	.89	1.0	1.1	1.2	1.4	1.6	1.7	1.9	2.1	2.3	2.4	2.5	2.5	2.6	2.6
2,000	.44	.61	.75	.86	.96	1.0	1.2	1.3	1.4	1.6	1.8	1.9	2.0	2.1	2.2	2.2	2.2
2,500	.40	.56	.68	.78	.87	.95	1.1	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.0	2.0	2.0
3,000	.36	.51	.62	.71	.79	.87	.99	1.1	1.2	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8
4,000	.31	.44	.54	.62	.69	.75	.86	.95	1.0	1.1	1.3	1.4	1.4	1.5	1.5	1.6	1.6
5,000	.28	.40	.49	.56	.62	.68	.77	.85	.92	1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.4
7,500	.23	.32	.39	.45	.50	.55	.62	.69	.75	.82	.92	1.0	1.1	1.1	1.1	1.1	1.2
10,000	.20	.28	.34	.39	.44	.48	.54	.60	.65	.71	.80	.87	.92	.95	.98	.99	1.0
15,000	.16	.23	.28	.32	.36	.39	.44	.49	.53	.59	.66	.71	.75	.78	.80	.81	.82
25,000	.12	.18	.22	.25	.27	.30	.34	.38	.41	.45	.50	.55	.58	.60	.62	.62	.63
50,000	.08	.11	.14	.16	.17	.19	.22	.24	.26	.29	.32	.35	.37	.38	.39	.40	.40

Example: When size of sample is 1,000 and survey result comes out 25%, you may be reasonably sure (odds 19 to 1) that this result is no more than 2.8% off, plus or minus. Doubling the sample to 2,000 reduces this tolerance to 1.9. (The above tolerances are those due to the size of the sample only; in most probability sample designs there are other factors that add slightly to the size of the tolerance. This table, therefore, serves as a rule of thumb.)

sample is needed than if the sub-group comprised one-half of the total universe.

In the overall evaluation, one has to decide whether being able to carry out a detailed analysis of the sub-group will justify the greater expense and extra time that a larger sample involves, or if one can be satisfied with the less reliable results that a smaller sample will provide for that sub-group. The objectives of the research, financial resources available, and many other factors will have to be taken into consideration in arriving at this decision. It is necessary to establish priorities and, undoubtedly, make concessions along the way.

Obviously, no tabulation of a sub-group can be expected to be as accurate as results from the total sample. On the other hand, many tabulations based on small sub-samples can be extremely useful when viewed as parts of the total pattern of results and not in isolation.

## Problems Unique to Travel Research

The design of samples for travel research presents problems not usually found in other market or opinion surveys. If the universe is all housewives, or owners of lawnmowers, or all adults in a county, the eligible respondents can be contacted at home with relative ease. But visitors to an area are highly mobile, have no “home” while in the area, and usually remain there only a short while.

To survey past visitors to a state, for instance, it would be possible to conduct a nationwide sampling among the general public. But obviously this would not be the most cost-efficient approach for the great majority of the contacts would be with people who would not qualify as visitors to the particular state. If on the other hand, information is wanted on how the state compares with other states as a travel destination, perhaps a nationwide probability sample would be cost-effective.

With respect to site-specific surveys such as sampling visitors in a state park, sampling while they are in the park may not pose a great difficulty. However, finding visitors to a city, or even a state, while they are there runs into the problem of *incidence*. One approach for sampling for past visitors to a particular region, state, or city, is to focus on all points a visitor passes through and to select the sample of those points from the flow of traffic.

Fortunately, it is possible to select, very systematically, points where people must exit by car, plane, train, bus, or ship; then it is also possible to intercept people very systematically as they come along. Eliminating the non-visitor in such a routine is simple. Exit interviews, however, should not be long because people are often in a hurry. It is, however, possible to expand these interviews later by mail or telephone on a selective basis, if desired.

An alternative preferred by some researchers, to intercept people as they enter the area, is discussed later in this chapter.

## Effects of Seasonality

Depending upon the definition of the universe, it will probably be necessary to conduct interviewing at various times throughout the year since seasonality has a bearing on many facets of travel. The reason for the visit, the length of stay, the amount spent, and the types of accommodations used may differ significantly from one season to another.

To obtain an accurate measure of year-round travel, therefore, it is necessary to have all seasons represented in the sample because one cannot make judgments for the entire year based upon behavior patterns that may not be typical. There are exceptions, of course, depending on the definition of the universe. If the universe is defined as the “skiing” market, then only the skiing season would be included.

Travel seasons are often defined in terms of quarters, and with interviewing conducted throughout the calendar year on a month-by-month basis, groupings of any three consecutive months may then be used to provide a definition that best suits the area. Seasons can also be defined in terms of activities—skiing, fishing, hunting, or whatever types of activities are dominant in the area.

## Other Types of Survey Sample Design

An alternative to the exit interview is one that uses a combination of face-to-face entrance interviews and diaries.

This sampling technique uses the following procedure:

1. A random sample of visitors is contacted as they enter the survey area and a short questionnaire

is administered at that time to obtain "basic" information, such as expected length of stay, place of residence, party size and purpose of trip.

2. At the conclusion of the interview, respondents are given a diary to be filled out during their visit, and usually some nominal incentive to encourage participation. The diary is then returned by mail after the respondents leave the survey area, and the completed diaries are used for tabulation.

The information obtained in the random sample of those who were contacted when they entered the survey area is then used as a control measurement to evaluate how representative the sample is of those who return the diaries. The reason this type of control is necessary is because not everyone who receives a diary will return it at the end of the trip. Experience shows that one might expect no more than 20 to 25 percent to return the diaries.\*

While a comparison of the responses from the control interviews and the returned diaries will provide an idea of how reliable the sample of diaries might be, there will always be questions about how the group that did not participate compares with those who did. Diaries, regardless of how well-designed and visually pleasing they are, require that the visitor record a great deal of detailed information about the trip, and they can become burdensome for those who spend longer periods of time before leaving. It is important to remember also that there is no guarantee that the

respondent will complete the diary as the trip progresses; it may be filled out upon completion of the trip, thereby partially defeating its purpose of providing a constant record of activities and expenditures.

Another limitation of this method is that some of the diaries that are returned are not completed properly, either because the respondent does not follow instructions or inadvertently omits some information. As the diaries are returned, it is necessary to go through them thoroughly to edit out inconsistencies and illogical responses; some will even have to be discarded because they are too incomplete to be used.

The primary advantages of the diary method, assuming the diaries are completed adequately and a sufficient number are returned, are:

1. They provide a contemporaneous record of detailed information, such as expenditures.
2. They allow one to chart, or follow the path of movement, for each respondent throughout the entire trip because information on expenditures is recorded according to the locality where the expenditure was made. Data can later be tabulated by combinations of specific areas within the total survey area.

The diary method has more application in highway travel research than in other types where visitors have more freedom in planning their routes and may stay for longer periods.

This advantage also has less importance if there are a limited number of geographic areas to analyze separately and they are defined before data collecting begins.

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\* In a study conducted by the Oregon Department of Transportation in 1975, 20 percent returned the diary; because some diaries were not usable, the effective rate of return was 16 percent.



## Chapter V

# ENLISTING COOPERATION OF GOVERNMENT AGENCIES AND CARRIERS

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A major travel research survey may require the consent and aid of federal, state, or local government agencies, commercial carriers, and other members of the private sector and local interest groups. A well-organized blueprint for communication with (and within) these agencies is a prerequisite to success.

Recognizing that a certain amount of "red tape" may well be encountered, notification should always be given well in advance of projected field dates. Each agency or carrier has its own procedures for granting clearances, some more complex than others.

## Whom to Contact

For each mode of transportation studied, it is a good idea to have a person in a position of authority to serve as the "primary contact." This person can then alert and brief his subordinates. These "secondary contacts" can subsequently be contacted directly to work out details. Such a system eliminates much confusion and tends to foster a spirit of cooperation and teamwork.

It is desirable to have the primary contact furnish a letter of consent which the interviewers can show to those unfamiliar with the project in the event the primary contact cannot be reached to verify the survey.

Primary contacts for local government agencies are usually located in the state's capital. Primary contacts for commercial carriers may be located in another state (i.e., regional headquarters). Secondary contacts are usually those people who work at or near the interviewing site.

*For highway travel*, the primary contact will probably be the director of public relations for the state's Department of Transportation. Officials at the Highway Department station nearest the interviewing site will be the secondary contacts; those officials may include transportation planners, survey department field supervisors, and traffic design engineers. A planning meeting with the secondary contacts will likely be required to work out the logistics and personnel requirements.

*For air travel*, the primary contact is likely to be the airport manager. The manager's role will be to grant the interviewers permission to interview in the airport and to notify airport security personnel. Due to the relatively large number of different carriers at the larger airports, the station managers of the respective airlines will have to be notified directly rather than via the airport manager. They, in turn, will alert the gate attendants.

*For train travel*, the primary contact is the director of the nearest railroad regional public relations office. The director will alert the station managers of the respective train terminals where the interviewers will be boarding. One of the station managers should be responsible for notifying the train's conductor on a daily basis since the conductor will likely be a different person each day.

*For bus travel*, the primary contact is the district manager of the bus line. The district manager will inform the terminal manager where the interviewers board the bus, and the terminal manager will enlist the cooperation of the bus drivers.

*For ship travel*, the carrier's vice president or general

manager can serve as primary contact. Secondary contacts are usually the terminal managers.

## Information Required by Agencies and Carriers

Agencies and carriers should be given as much information about the study as possible at the outset, to help them evaluate more quickly their ability to cooperate. Some of the types of information they may need include:

1. Description of the study objectives.
2. General dates of field work.
3. Description of interviewing methodology.
4. Questionnaire and other field materials.
5. Manpower requirements.
6. Equipment requirements.
7. Names of field supervisor and/or interviewers.
8. Certificate of liability insurance for interviewers and/or letter of release of liability.

In some cases, the agency or carrier may request a copy of the survey results in return for their cooperation.

Usually a formal letter of agreement will need to be executed with the cooperating agency or carrier prior to starting the field work.

## Information to Obtain From Agencies and Carriers

Certain types of information and materials critical to the design and successful execution of the survey can be obtained directly from the cooperating agencies or carriers. Requests for such information should usually be directed to the primary contact, who can then

delegate the task of information-gathering to the appropriate staff member(s).

Some of the necessary information and materials include:

1. Number of weekly trips/flights.
2. Schedules and boarding times.
3. Capacities of buses, train cars, ships. (Diagrams are very helpful.)
4. Ticketing and boarding procedures, including physical layout of boarding areas.
5. Expected passenger volumes.
6. Highway traffic counts.
7. Free boarding passes for interviewers.
8. Permits for free terminal parking for interviewers.
9. Letter of consent from primary contact.
10. List of names and telephone numbers of secondary contacts.

\* \* \*

## Out-of-pocket Expenses

During the course of field work, various out-of-pocket expenses can be expected, and these should be included in the travel research budget.

For example, enlisting the assistance of highway patrolmen may result in a separate charge for their services by the Highway Department. This is because their activities during the survey are not directly related to law enforcement.

Other out-of-pocket expenses are encountered when a carrier requires interviewers to pay full or partial fares, or if the interviewers are unable to obtain free parking permits at terminals.

# Chapter VI

## PREPARATION OF FIELD MATERIALS

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The basic types of field materials that are used in conducting travel research include:

1. Recording forms
2. Questionnaires
3. Show cards
4. Interviewing specifications

Some items, such as the recording forms, will vary slightly from one mode of transportation to another, but some general rules for their preparation apply to all. Specific examples of different types of materials are included in the Appendices.

### Recording Forms

Recording forms generally serve two purposes:

1. As an "assignment sheet" for the interviewer.
2. As a place to record vital information that does not appear directly on the questionnaire.

Certain parts of the form will be filled out in the office before it is turned over to the survey crew, and in this sense, it serves as an "assignment sheet." Typically, information such as the date, interviewing times, flight number, and highway exit number, are filled in in advance.

The survey crew completes the form as the work is being done, recording such information as the total number of enplaning passengers and the number of qualified versus non-qualified vehicles that pass a certain point during the survey time period.

The main advantage of designing the form to serve as both an assignment sheet and a place for the survey

crew to record information is that vital information that is needed for future reference, appears on one document and is easy to locate.

The format of the recording form will vary from one mode of travel to another, depending upon the type of information needed. Generally, the recording forms will include the following information:

1. Highway—Identification Number, Highway Number, Date, Interviewing Hours, Tally of Traffic Counts (by qualifying and non-qualifying vehicles), Result of Interview, Interviewer Number.
2. Air—Identification Number, Flight Number, Date, Time of Day Interviewers Should Arrive at Boarding Gate, Total Number of Enplaning Passengers, Number of Completed Interviews, Interviewer Number.
3. Bus—Identification Number, Bus Line, Trip Number (Destination), Date, Time, Boarding Location, Total Number of Passengers, Number of Completed Interviews, Interviewer Number.
4. Train—Identification Number, Date, Time, Boarding Location, Total Number of Passengers, Number of Completed Interviews by Car Type, Interviewer Number.
5. Ship—Identification Number, Date, Time, Total Number of Boarding Passengers, Number of Completed Interviews, Interviewer Number.

### Questionnaire

The first step in constructing the questionnaire is to review the outline of objectives established for the study. The outline, when utilized properly, provides a valuable tool for remaining on target as questionnaire planning proceeds.



Sometimes one question will be sufficient to satisfy a particular objective; at other times, several questions may be needed to cover a single point on the outline.

It will be helpful if each question formulated to cover a topic on the outline is written on a separate sheet of paper. If this approach is used, it is easy to experiment with the questions in various sequences before finalizing the survey instrument.

A series of suggested questions for travel research appears in Chapter 3.

## Questionnaire Format

Simplicity is the key!

It is important to keep in mind that the questionnaire will at times be used under adverse conditions—poor lighting, inclement weather, and other less than ideal interviewing conditions. While the questionnaire should be designed primarily with the interviewer in mind, subsequent processing of the questionnaires should also be considered. Following a consistent format, wherever possible, throughout the questionnaire makes the job of the interviewer much easier, and perhaps more importantly, reduces the chances of errors.

While every questionnaire will be different, based upon the survey objectives, types of questions asked, and the amount of information desired, there are some important guidelines to follow: (Examples are included in the Appendices)

1. Whenever possible, put the question on the left-hand side of the page and the pre-coded responses on the right-hand side.
2. Codes for the interviewer to mark responses can be either a number that is circled or a box that is checked, but be consistent throughout the questionnaire.
3. Instructions to the interviewer should be ALL IN CAPS, while questions or statements to be said out loud by the interviewers are in Caps and lower case.
4. Avoid, as much as possible, the use of complicated arrows for instructing the interviewer to go from one place to another on the questionnaire.
5. Place the code number as close to the response category as possible. The greater the distance between the two, the more chance there is that the interviewer will inadvertently

skip a line and record the response in the wrong place.

6. Leave a sufficient amount of space for those questions where the interviewer must write in verbatim responses.

Actual interviewing conditions dictate that the questionnaire should be constructed and designed for ease of handling by the interviewer.

Some alternatives that are available include:

1. Printing the questionnaire in the form of a four-page booklet folded on the left-hand side.
2. Printing the questionnaire on single pages and stapling them together in the upper left-hand corner.
3. Printing the questionnaire on the front and back side of the page.

Both the first and second alternatives (particularly the second) are cumbersome to use under the type of interviewing conditions that are to be expected.

Since a travel research questionnaire should be limited to ten minutes in length, it is very likely that it will fit on two sides of a page, even though 8½- by 14-inch paper may have to be used. In order to compress the questionnaire to two pages, some type reduction before printing may be required; if so, be sure that the reduced type remains legible and that enough space is provided for the interviewers to record verbatim comments.

Using a type face that is clean and bold is preferable when reduction is necessary.

Limiting the questionnaire to one sheet, front and back, not only facilitates the interviewing process, but also reduces printing and mailing costs, and simplifies questionnaire processing.

Proper questionnaire construction comes with practice and experience, but there are a few guidelines that will help:

1. Use simple words and grammatical constructions so that the questions can be easily understood.
2. Place personal or difficult questions toward the end.
3. Provide enough space for the interviewer to record verbatim replies.
4. Provide clear, concise instructions for the interviewer directly on the questionnaire.

## Sequence of Questions

Normally, the first question, or first few questions, on the questionnaire will be designed to screen out, or eliminate, non-qualified respondents. Disqualification can result from a number of factors; for example, residents of the area, people who commute daily to work in the area, and students (who are actually residents), should be excluded from a sample of visitors.

Also included in the screening sequence is the selection of the respondent from the travel party. This will normally be the head of the travel party, but may vary depending upon the definition of the survey universe.

Screening questions (the format is shown on the example questionnaire), while part of the questionnaire itself, should be designed so that the screening information can be recorded without wasting an entire questionnaire when a respondent turns out to be ineligible. That is, a questionnaire instruction can tell the interviewers to terminate the interview and record a tally mark directly on the questionnaire each time an ineligible respondent is screened out of the sample. The interviewer can then keep a running tally of ineligible respondents on the same questionnaire until an eligible respondent is selected and interviewed.

Throughout the questionnaire, considerable care must be taken to avoid bias that might result from the sequence in which questions are asked. Try various sequences to see how one question, or response, might affect the following questions. With some practice, and the result of the pretest by experienced interviewers, sequential bias will become readily apparent.

To insure that the questions "flow" properly from one to another, the following general rules apply to questionnaire sequence:

1. Start off with a question, or series of questions, that will be most interesting to the respondent. These questions should not, of course, be ones dealing with confidential information or ones that require a great deal of thought on the respondent's part. (Proper interviewer training, and the use of experienced interviewers, will also aid in establishing rapport with the respondent and successfully launching the interview.)
2. When possible, questions should go from the "general" to the "specific."

3. Open-end questions, in which you are seeking the respondent's "top-of-mind" response should precede questions that might precondition his response. (For example, asking the respondent to agree or disagree with a number of statements about what the area has to offer and then following up with a question about his general impression of the area would be improper sequence.)
4. Demographic information (age, education, income, etc.) should be last in the series of questions, because near the end of the interview, the respondent is most at ease with the interviewer and is more likely to answer "personal" questions at this point; furthermore, if a respondent should take offense to a demographic question and terminate the interview, it is possible that sufficient information has been obtained to salvage the questionnaire.

## Show Cards

Show cards are used as an aid to the interviewer and the respondent, during the course of the interview.

They are particularly useful when:

1. It is helpful to let the respondent visualize alternatives.
2. Long lists of alternatives are possible and the respondent could not remember all of them if the alternatives were read.
3. Confidential information (such as age, income, and education) are needed.

Although one advantage to the show card is that a number of alternatives can be presented at one time, it is important to limit the amount of detail that appears on any one card. Respondents cannot be expected to read line after line of material or to fully comprehend slight nuances, or exceptions, in an interview situation.

If there is too much information to fit on a single card, it is necessary to split the information onto two cards. The respondent can still look at both cards if they are positioned on facing pages of a booklet.

Another consideration in designing the show cards is the ease of handling for both the interviewer and the respondent. While show cards, which are normally printed on 8½" by 11" cover stock, are a valuable tool in the interview, they are another item that the interviewer must keep track of in the interviewing process.

Some guidelines for show cards are:

1. If only two show cards are needed, one can be printed on one side of a card and the other on the opposite side.
2. If more than a few show cards are needed, and this shouldn't happen often, the cards can be assembled in a booklet bound on the left-hand side, and the respondent can go through the booklet as the questions are being asked.
3. While it is preferable to have only the responses for one question at a time printed on the card, there may be times when it is better to put two on the same side of the card. This should be done only when there are few alternatives to each question (to avoid having a card that is "cluttered") and when the questions follow one another in sequence. If there are intervening questions, the respondent might be reading the remainder of the card rather than concentrating on the question.

## Interviewing Specifications

Interviewing specifications are the written guidelines which serve as an instruction book for interviewers during the course of the study. These instructions also provide an outline of topics to be covered at the personal training session.

The interviewing specifications will generally include:

1. A checklist of the materials needed for the survey.
2. Dates and times when the interviewing is to be

done, and instruction on how to work with the "recording forms" and fill them out properly.

3. Whom to contact during the course of the survey if additional help is needed.
4. How the sample selection procedure is used to find respondents.
5. How to handle each of the questions on the questionnaire.
6. The rate of pay for the interviewers.
7. Instructions for returning materials.

Interviewing specifications should be written clearly and concisely. While it is difficult to cover every contingency that might come up in the course of the field work, include as much detail as you can, which will reduce the number of times the interviewer will have to recontact you for clarification.

Divide the interviewing specifications into separate sections, each dealing with a different facet, such as general information, respondent selection, interviewing techniques, and the actual questions.

The section on general interviewing techniques should cover how to record information on the questionnaire and probe for meaningful responses to open-end questions, if appropriate.

In the question section, cover each question specifically unless it is self-explanatory, using the result of the pretest to pinpoint those questions which require special care.

Use summaries throughout the specifications, and highlight them by using boxes, underlining, or other graphic techniques.



# Chapter VII

## FIELD ADMINISTRATION

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### Interviewer Training

Since the entire interviewing process is one of communication, the proper training of interviewers as communicators is critical to the success of any survey. In their roles as interviewers, they perform four main functions:

1. Selecting the correct respondent to be interviewed.
2. Persuading the selected respondent to grant the interview by gaining his confidence and trust.
3. Communicating to the respondent the information in the questionnaire in an understandable and objective manner.
4. Eliciting meaningful responses from the respondent and recording them legibly on the questionnaire in such a way that they can be tabulated with a minimum of editing.

In the selection of interviewers every effort should be made to secure a staff of the highest quality. This can be accomplished by a thorough screening of all applicants. The screening should include a check into the applicant's interviewing experience as well as reliability by contacting those for whom he has interviewed in the past. Interviewers who are strictly "part-timers" should be excluded, if possible, since their involvement with other activities may detract from their interviewing performance. If the survey is a repeated phase of a study, it is best to secure the same interviewers for each phase to minimize the need for retraining.

All interviewers should be required to attend a training session prior to conducting any interviews. If the survey is a repeated phase, all interviewers new to the project should come early to the training session so they may be instructed in the basic administrative

details. The session should begin with an explanation of the over-all objectives of the study so the interviewers will feel they are a vital cog in the process. The training will be more productive if an atmosphere of a "question and answer" session is maintained rather than that of a formal lecture. Slides or other visuals often prove helpful in explaining paperwork as well as in making the session more interesting to the interviewers. If a survey calls for a combination of interviewing methods, such as personal and telephone, separate sessions should be held for each.

Due to the amount of detailed work involved in conducting and recording interviews, all interviewer instructions should be in writing. It is helpful to provide interviewers with at least a portion of the instructions prior to the training session so they may prepare for it. Since the person conducting the training session can only hope to cover the highlights of the material contained in the written instructions, interviewers must be urged (and paid) to become thoroughly familiar with the instructions before conducting any interviews. The written instructions should cover the administrative details, the basics of interviewing, and the respondent selection procedure, with a complete section devoted to the handling of questions in the questionnaire.

Solutions should be provided for problems the interviewer will be likely to encounter in the work.

The trainer should work with and/or observe the interviewers, at least during their first day of work, and be prepared to consider making procedural adjustments as unforeseen problems arise. The trainer should personally check the first day's work of each interviewer so that any problems can be caught and corrected at an early stage.

# Sources of Interviewers

There are three primary sources for obtaining interviewers:

1. Independent professional interviewing services.
2. Universities.
3. Full-time employees.

## Independent Professional Interviewing Services

Professional interviewing services, if carefully selected, will usually offer the most expertise in conducting a survey because they maintain relatively stable staffs of interviewers who conduct interviews for a living. Moreover, such services are best prepared to coordinate surveys involving especially large numbers of interviews or covering large geographical areas. Interviewing services can also be the most expensive source of interviewers since they normally charge a fee of 35-60% of direct interviewing costs. In selecting a service, the following should be taken into consideration:

1. Cost.
2. Timing—how long the interviewing is expected to take.
3. Reliability—according to some of the service's past clients, how did the service perform with regard to quality of field work, punctuality, congeniality, and cost efficiency.

It is recommended that at least three interviewing services be evaluated.

## Universities

As an alternative to employing a professional interviewing service, college and university students represent another source of interviewers. College students are fairly easy to recruit in large numbers, usually through the business school or the social sciences departments. Their working hours can be quite flexible, they are young and eager, and they will often work in situations where others might refuse. On the other hand, college students generally lack the experience and expertise of a professional, and require more extensive training and retraining. Moreover, their classwork may interfere with their interviewing activities, and some may lack available transportation to reach the interviewing site.

## Full-Time Employees

Another means of obtaining interviewers is to employ them directly on a full-time basis. While in most cases the funds to support an in-house staff will not be available, this approach can be feasible for large-scale and continuing studies. Full-time employees offer the obvious advantage of experience. When the same interviewers are able to work on each phase of a project, they become intimately familiar with the questionnaire and field procedures; thus, time and costs associated with retraining and turnover should be minimal. If slack periods occur, the interviewers can help out temporarily in other areas such as editing and coding questionnaires.

## Logistics of Maximizing Productivity

Due to logistics problems inherent in travel research, steps must be taken to contain field costs without sacrificing the integrity of the sample. Cost efficiency can and should be accomplished through proper sample design. Logistics problems and their solutions vary among the different modes of transportation being studied.

### Air Travel

In a simple probability sample, all airports within a state would be arrayed according to their average annual number of passengers, and each airport's chance of selection would be proportionate to its passenger volume.

By this method, small airports with minimal traffic would occasionally be selected, resulting in cost inefficiencies from sending interviewers to cover airports where flights are few and far between. For this reason, it is recommended that airports with less than 5% of total air passengers be excluded from the sample.

In the selection of flights to be sampled within each selected airport, a pure random selection of flights would result in some selected flights leaving at or close to the same time as others, requiring additional interviewers. To avoid this, all flights can be arrayed by departure time and one flight picked at random (using an interval) for each day of the week of interviewing. Additional flights can then be picked following each of these initial flights, leaving sufficient time between flights so that one team of interviewers can work all of the selected flights.



## Highway Travel

Simple random sampling of exit highways presents logistics problems similar to those encountered in air travel. If all exit roads are considered eligible for sampling, regardless of traffic volume, the result will be that some back roads will be selected which do not have enough traffic to warrant the costs of including them in the sample. Therefore only those exit highways with at least 5% of total traffic should be eligible. These highways can be clustered geographically around the perimeter of the state according to their distances from headquarters, and highways to be sampled can be selected from these clusters so that geographical dispersion is achieved. Time schedules for sampling highways within clusters should be arranged so that an interviewing team traveling to a cluster can stay over and work more than one highway within the cluster rather than making additional trips back and forth.

## Bus Travel

Highways with at least 5% of total buses leaving the state should first be clustered geographically as discussed above to ensure proper representation. Highways (routes) are then selected from the clusters, and finally, specific bus trips are selected from each designated route. Simple random selection of trips along a selected route would be impractical since interviewers interviewing aboard a bus must have adequate time to return to the departure point for the next bus. The solution is to pick a trip at random for a selected route and then examine the carrier's schedule of trips going both ways in order to select subsequent trips that will allow the interviewers to ride a bus back to the point of departure in time for the next selected trip. If possible, an arrangement should be worked out with the carrier to allow interviewers to ride free of charge both ways.

## Train Travel

Logistics problems and solutions associated with train travel research are similar to those encountered in bus travel research, but are compounded by the fact that train trips along selected routes are generally less frequent than bus trips. Therefore, a team of interviewers will seldom be able to complete a round-trip journey in time to catch another train the same day. In addition, each train trip will require more interviewers and a longer ride to cover the entire train, if that is the objective. Sometimes it is more

efficient to subsample a train by car type, rather than taking a complete census. This requires fewer interviewers, allowing other interviewers to work a separate train trip the same day.

## Ship Travel

The infrequency of ship departures in most states makes clustering of ports or trips impractical, and whatever trips are available will usually be sampled. The exception to this would be the selection of ferries leaving the state (or country) on a frequent basis. The method of selecting ferry trips would then be the same as that discussed for selecting flights, unless the interviewers conduct interviews aboard the ferry, in which case the considerations for selecting and scheduling bus trips would apply.

## Importance of Back-up Field Staff

Because of the unique problems connected with sampling in travel research, and the mobility of the universe, it is extremely important to take precautions to see that the field staff is available and ready to work at the proper times. In many other types of marketing research, where respondents are interviewed in their homes and usually available over a period of time, a delay of a day, or even a week, may not be critical. However, in a study of air travel for example, once the selected flight has departed, it is not feasible to recover the interviews.

Even interviewers with the best intentions, and reliable past performance, can have something come up at the last minute that prevents them from meeting their assignment. Therefore, additional controls are necessary, and the following are recommended:

1. Notify the interviewer and confirm the time and place of field work within 24 hours of the time interviewing is to begin. Do not assume that because the interviewer has been notified by mail earlier that she is available to work.
2. Have interviewers check in a few hours before they leave home, which may give you enough time to line up a substitute if necessary.
3. Send out notices of the time and place well in advance of when the field work is to be done so the interviewers can schedule their time, and ask them to confirm that they will be available when needed. It is also necessary to impress upon the interviewers why it is so important that they are



available at the appointed time.

4. Set up the field work procedures so that at least two interviewers will be working each flight, highway exit, bus or train schedule so that if something prevents an interviewer from working, the assignment will be at least partially covered. This will be taken into account in the sample design; fewer individual sampling segments will be selected, but still enough to provide wide dispersion throughout the year.

## Returning Completed Work

If a member of the research staff is supervising, or working, on the site each time sampling is done, this is no problem because the work can be picked up immediately following the interviewing period. If the interviewer is working without direct supervision,

such as may occur in isolated cases when travel distances do not justify the expense, it is a good policy to require that the completed work be sent back within 24 hours of the time the interviews are conducted. Unless this stipulation is adhered to, interviewers may delay getting the work returned, and it may become lost or destroyed. Included in the interviewing specifications will be a list of the materials that are to be returned when interviewing is completed. The materials are:

1. Completed questionnaires
2. All unused questionnaires
3. Survey recording forms
4. Interviewer billing sheet

Materials that the interviewer may need for work at a later date, or items that are not confidential in nature, do not need to be returned.

# Chapter VIII

## QUALITY CONTROL

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The first step in maintaining the quality of the interviewing is personalized training sessions and complete written instructions covering all phases of the interviewing, which were discussed in Chapters 6 and 7.

It is particularly important that the interviewer's first day's work be checked thoroughly and the work reviewed with the interviewer, going over the questionnaire step-by-step. With thorough training and proper supervision in the field at the beginning of the study, errors should be minimized and corrected immediately.

In addition to this training, it is necessary to continuously monitor the quality of the field work as the interviewing progresses. All field work should be checked immediately as it arrives in the office.

The checking procedures include:

1. Making sure recording forms for the interviewing period are filled out correctly.
2. Checking to see that information common to all

questionnaires in a batch (such as interviewer number and date of interview) appears on each questionnaire. It is much easier to fill in the missing information at this point while all of the questionnaires from the group are still together than after the editing and coding process has begun and they have been separated.

3. Verifying that questions are being handled properly and according to the interviewing specifications.
4. Seeing that answers to interrelated questions are logical and consistent.
5. Making sure that probing on open-end questions is complete.
6. Seeing that the proportion of non-response in each interviewer's work is reasonable.
7. Investigating the reasons behind any unusual patterns of responses appearing in a particular interviewer's work.

A performance record should be kept on each interviewer to indicate possible problem areas, and the interviewer should be notified immediately about inconsistencies or errors found in the work.

# Chapter IX

## DATA PROCESSING

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Between the time the field work is completed and the results are available for analysis, three steps are necessary:

1. Editing and coding
2. Punching and verifying
3. Tabulation

### Editing and Coding

Editing is the process of going through each questionnaire individually, and thoroughly, to ensure that the questionnaire has been properly completed and the answers to interrelated questions are consistent and logical.

Coding is the process of converting responses, which appear in written language, into numerical values that are compatible with the type of data processing equipment that will be used later in tabulation.

The two steps, particularly when the questionnaire has been designed to minimize the amount of coding that is necessary, can often be accomplished at the same time, which not only cuts down the labor cost, but also reduces the amount of time it takes to complete the tabulation phase. The decision of whether it is necessary to divide the process into two steps will be dependent upon the complexity of the questionnaire and the amount of coding that is required. If the questionnaire is designed to avoid complicated skip signs\* and is properly laid out for convenient use by the interviewer, the need for editing will have already been reduced substantially.

Moreover, if the normal quality checks (such as thor-

\*Skip signs are notes to interviewers to help them bypass questions inappropriate to certain respondents.

ough examination of each interviewer's first day's work, discussed earlier, and maintenance of quality control throughout the course of the study) have been fully implemented, the problems should have been caught prior to the editing phase.

Editing can often salvage a questionnaire, and only in rare instances should it be necessary to discard unusable questionnaires. In many marketing research studies, respondents may be recontacted to clarify or fill in missing data, but in travel research, this is often impractical because of the additional expense involved or the fact that the information needed may be heavily dependent upon the respondent's recall of specific events or expenditures that occurred as much as a month ago.

Some level of missing data is to be expected in all marketing research, either because the respondent refuses to answer the question or the interviewer fails to record an answer. While in most cases a missing response here and there on a questionnaire will not be critical (because the percentage of non-response will be quite small in the final tabulation), it may be necessary to discard a questionnaire occasionally when the omitted response is one that is absolutely essential in the later stages of tabulation. However, proper quality control throughout the study, plus some logical assumptions and checking of other records, can often eliminate the need to discard an incomplete questionnaire.

For example, an interview obtained in a highway study would be virtually meaningless if the respondent's exit point were omitted from the questionnaire. However, a check of the field records could determine where the interviewer worked on the day that the respondent was interviewed, thus salvaging the questionnaire.



The problem of which questionnaires must be discarded occurs more often when the respondent has terminated the interview before it is completed. Generally, if the interviewer has already obtained most of the information that is critical to meeting the objectives of the study and records such items as sex of respondent and an age estimate, it is generally acceptable to use the questionnaire. Proper interviewer training, working with experienced interviewers who have the ability to hold the respondent until the interview is completed, reduces this problem significantly.

Another potential problem is the questionnaire with an excessive number of “don’t know” responses, the result of the respondent’s inability or unwillingness to answer many of the questions posed by the interviewer. As with terminated interviews, if there is a substantial amount of critical information missing, it is better to discard the questionnaire.

## Checking for Consistent and Logical Replies

What constitutes consistent and logical relationships between questions on an individual questionnaire varies, of course, depending upon the total amount of information that is available, so it is impossible to set hard and fast rules concerning what is to be checked. Some examples, however, might be:

1. “Male” checked for sex of respondent, but name is preceded by “Mrs.” (change sex designation to “Female.”)
2. Total number in travel party is recorded as “one,” but “two” adults in travel party recorded elsewhere on the questionnaire. (It may depend upon the layout of the questionnaire; if it appears that the interviewer would have more trouble circling the proper code for the number of adults than for the total in the travel party, change the number of adults to correspond to the total number in the travel party if the age of the respondent indicates he is an adult.)
3. Respondent spent four nights in the area, used commercially-owned lodging, and spent only \$10.00 on lodging and accommodations. (Edit the amount spent to “don’t know.”)

An important part of interviewer training, discussed earlier, is to encourage interviewers to write in any comments made by respondents during the course of the interview which help explain apparent inconsistencies. An individual respondent who had spent one night in the area but reported spending \$700 on food

and refreshments would be questionable; a note jotted in the margin that he was a sales manager entertaining a group of buyers eliminates the cause for concern.

## Coding

As mentioned earlier in the chapter on questionnaire construction, as many of the responses as possible should be pre-coded on the questionnaire. Sometimes, however, it is desirable to have “open-end” questions, and before coding can begin, it is necessary to prepare a list of related replies which will categorize the different types of responses.

These open-end responses are not limited to lengthy verbatim replies; they include all questions not pre-coded on the questionnaire, including such items as expenditures, length of stay, occupation, and place of residence. For some of these types of questions, such as occupation, there are standard classifications which have been defined previously. Others, however, may require that a sample of the responses be tabulated to determine which types of answers, or categories of answers, come up frequently enough to be reported separately and which types of answers are similar enough to be combined into a single code.

To establish the codes, at least 100 questionnaires, selected systematically from the entire group of questionnaires available at the time, should be used. Since patterns of responses may differ according to the area in which the interviews are completed, it is important that the selection come from a variety of questionnaires. For example, if the area offers both beaches and ski slopes, those people who travel to the area for the express purpose of enjoying one or the other may have different impressions about the most significant feature of the area. If the random selection of questionnaires used to establish codes all come from interviews conducted at an exit point near the beaches, then the number of “skiing” responses may appear so seldom that it is decided to combine those responses with some other related activity. Then, as coding proceeds and the interviews conducted near the skiing areas are processed, the necessity of providing separate “skiing” codes becomes evident, a new set of codes must be established, and the already-processed questionnaires must be recoded.

Categorizing the open-end responses to each question is best done by sorting them into logical groups. Summary statements for each group, with codes assigned, might look like the example below for a ques-



tion such as, "What are some of the things you or other people with you did on this trip?"

- 1 —Visited friends or relatives
- 2 —Visited specific attraction
- 3 —Sightseeing
- 4 —Visited mountains
- 5 —Visited beaches
- 6 —Camped in national park
- 7 —Attended professional sports event
- 8 —Business purposes
- 9 —Shopping
- 0 —Other
- X —Don't recall, no answer

Notice that the number of categories shown above has been limited to eleven, which conveniently fits into one column of a data processing punch card. Avoid the temptation of trying to set up a code for each specific response; it requires too much in the way of coding, takes up additional columns in the punch card, and in the final tabulation, the percentage for the response will be too small to be significant.

In the example above, multiple answers are possible and could be punched into the same column. Depending upon the type of data processing equipment which is to be used, it may be that each response would have to be punched into a separate column (discussed later in this chapter).

Another type of question that may require coding is the type that converts a specific numerical value into "ranges" which are then punched into cards. Two considerations are important:

1. For some types of measurements, such as length of stay, standard ranges should be established which preserve comparability from one study to the next.
2. When items with specific numerical values are being grouped, such as expenditure data, the group boundaries need to be established so that the response with the highest frequency is centered within the group because estimates of the average are frequently based on the mid-point of the range. It will take some experimentation using different low and high points of the boundaries to establish the proper ranges.

For example, if the value of \$25.00 came up frequently, it would be improper to use a range of \$25.00 to \$49.99 because the mid-point would be assumed to be about \$37.50.

Another alternative to using the mid-point is to establish the "actual" average value of each range from a tabulation of a "sample" of responses which fall within the range.

## Written Instructions

It is vitally important that editing and coding instructions be in writing. This provides the document that details how individual situations are to be handled under specific circumstances and can be used from one person to the next to ensure consistency. Even though the same person may be doing all of the editing and coding, other tasks will likely disrupt the process, and subtle nuances may be forgotten over a period of time. Editing and coding procedures must be consistent, not only from person to person, but from the beginning to the end of the project.

Obviously, not every specific decision or exception that is involved in the editing and coding process will be covered at the time the instructions are written, and additions will be required from time to time as new situations arise. As with the basic instructions, it is important that each of these additions be documented in writing.

## Training Editors and Coders

If more than one person, or someone other than the writer of the instructions, will be doing the editing and coding, a training session, using actual questionnaires and the instructions, should be held to make sure that the instructions are concise and clear to all involved.

Thorough training of editors and coders is as important as that of interviewers; the time spent in training will more than pay off later, as it will minimize the chances of having to go back to recode in order to eliminate inconsistencies.

All coding done on the questionnaires should be in a different color than that used by the interviewers to indicate that it is a coder's mark, not the interviewer's. Codes should be placed on the questionnaire in a position that is easy for the keypuncher to pick up when the punching is being done.

## Punch Card Format

After codes have been established and the number of columns that are needed for each of the open-end

codes has been determined, the punch card format (column assignment) is set up. The card format defines the location in which each response will be punched into the cards. The standard punch card has 80 columns with 12 possible punches in each column. An example of a column assignment appears in the Appendices.

The card format may vary, depending upon the type of tabulation hardware that is to be used; some machines will accept multiple punches within a column, and others will not. The appropriate time to determine this is when the questionnaire is being designed and pre-coded answers are being printed on the questionnaire.

While it is possible to convert multiple-punched columns into a single-punch format, the process can be expensive and time-consuming. It is much better to do it in advance because it will save both time and money in the tabulation phase.

In addition to the codes for the actual questions that appear on the questionnaire, other data from the interview will become part of each respondent's record. These include:

1. Respondent identification number—Each questionnaire (or respondent) is assigned a unique number which is punched into the card for identification purposes. Sequential numbering of the questionnaires is often required because many computer programs have a feature which checks the cards as they are being read into the machine to make sure that there are no missing cards or duplicate cards for the same respondent.

The respondent number is also used in "cleaning" the cards, a second step after punching has been verified to rid the cards of any stray punches and to test comparability of responses. For example, if the respondent had reported that there were two adults in the travel party in one spot on the questionnaire and that the total party size was one in another spot, there is an obvious error. This may not have been detected in the editing and would have been punched and verified with the error intact. A "cleaning" procedure in which the number of adults is compared with the total party size would reveal this error, and the respondent number could then be used to locate the original questionnaire and resolve the problem.

2. Interviewer number—This is the number assigned to each interviewer who will be working throughout the course of the study. The interviewer number is recorded for each respondent because it is desirable to run special tabulations to judge the interviewer's performance—either in terms of patterns of responses or quality of interviewing.
3. Exit point identification—The exit point identification number is included to facilitate running additional tabs based on sub-segments of the sample. This identification is usually designated with a code number rather than a verbal description so it is easier to pull out mechanically.

It is often desirable to incorporate other information into the exit number; for example, the flight number and a code for the carrier may also be included.

4. Month of interview—The month the interview was conducted should be part of each respondent's record so it is possible to tabulate the data by fiscal years, calendar quarters, seasonality, or other combinations. In some instances, it may be desirable to code the date of the interview into smaller than monthly time segments should the normal season for a particular activity not follow the calendar.

As with other codes, it is best to have the time period codes be as specific as possible to allow greater flexibility in interpreting survey results. Even if the original plans only call for an analysis of the interviews by the four seasons of the year, it is still a better idea to code the months individually rather than combining several months into one "season" code. In this way, results for each of the four seasons can be obtained by combining month codes in the tabulation phase, but if plans change at a later date, it will still be possible to analyze the data by any combination of months that is desired.

5. Weighting punches—Due to the nature of the sample design being employed, it may be necessary to assign each interview a "weight" that will be used in tabulation. A field of one to five columns should be set aside in the card for this purpose.
6. Card type identification—If the questionnaire contains more information than will fit into the



standard 80-column card (most travel research questionnaires will not be that long), it is necessary to insert a punch somewhere in each of the cards to differentiate between two different types of data. For example, column 9 of the first card may be assigned to a question on the main purpose of the trip, while column 9 in the second card deals with the number of nights spent in the area. Without specifying the difference, the computer would pick up responses for both and combine them.

7. Job identification—This punch is used to differentiate between different surveys, jobs that are going on at the same time, or over a period of time. Should the cards become interspersed with another job for some reason, it is a simple matter to run them through a sorter to separate them into their proper group.

## Keypunching

After the coding has been completed, the codes from each individual respondent's questionnaire are punched into a data processing card, or cards, and this becomes the "record" for that individual.

Punching may be accomplished in either of two ways:

1. From a transfer sheet.
2. Directly from the questionnaire.

The transfer sheet is a printed form with 80 columns, each representing a column in the punch card, allowing the keypuncher to punch the data from left to right. While this has the advantage of faster punching, it also requires that all codes from the questionnaire be transferred to the sheet (part of the coding process). The additional step of transcribing codes also increases the chance for error.

The better alternative is to punch directly from the questionnaire. While it may take more time at the beginning for the keypuncher to become acquainted with the location pattern of the codes, most experienced keypunchers can adjust to a new questionnaire quite rapidly.

If punching is to be done directly, it is extremely important that this be taken into consideration in laying out the format of the questionnaire so that the codes are arranged in such a manner that they can be located and read easily. One alternative is to place all

the codes in either the left- or right-hand margin to facilitate going from the top to the bottom of the questionnaire page. Columns should also be assigned in the order that the eye travels down the page of the questionnaire.

## Gang Punching

There may be times when it is advantageous to put "summary" punches in the card to represent combinations of codes in order to simplify the computer logic. One example of this is combining all states that comprise the New England Discover America Travel Organization (DATO) Region.

While it would be possible to assign a DATO Region code in the editing and coding instructions and have the keypuncher punch it for each respondent, a more efficient (and accurate) method is to punch only the state of origin. After all the cards have been punched, they can then be sorted out based on the "state of origin" punch, grouped together, in the desired combinations, and the summary punch for the DATO Region mechanically "gang punched" into each card.

## Verification

Verification is the process of running each of the punched cards through another machine, similar to a keypunch machine, and repunching the questionnaire. The machine is designed so that if the operator, who is someone other than the person who did the original punching, tries to punch a different code than appears in the card, an error condition is indicated.

## Card Cleaning

A final quality control procedure is that of "cleaning" the cards. This involves setting up a series of logical comparisons between the punch in one column and the punch in another column. One example mentioned earlier is that of comparing the total number of persons in the travel party with the number of adults; the number of adults can never exceed the number of the total party.

As another example, if a question contains a "skip sign" which instructs the interviewer to skip two subsequent questions if the respondent answers "no" to the first question in the series, then the cleaning proc-

ess will include a step to verify that the skip sign was properly followed. Thus, if the code for “no” is a “2” in column 11, then columns 12 and 13 must be blank whenever there is a “2” in column 11. On the other hand, if there is a code “1” (signifying “yes”) in column 11, then columns 12 and 13 must always have a punch.

Establishing which questions (column and code punches) can be cleaned against each other requires going through the questionnaire thoroughly to determine where relationships exist.

## Tabulation Procedures

Three different levels of sophistication are commonly used in tabulating marketing research studies:

1. Hand tabulation
2. Counter-sorter
3. Computer

Each has its advantages and limitations which are discussed below.

### Hand Tabulation

Hand tabulation, as the name implies, is done completely without the use of electronic data processing equipment. Normally, this type of tabulation is limited to studies with small sample sizes where there will not be a large number of analyses performed on the data.

Most travel research studies, which employ sample designs requiring sophisticated “weighting” and the results of which undergo detailed analysis, do not lend themselves to hand tabulation. However, there are times when it can be used—for example, if a few questions are added to a questionnaire during one interviewing period just to get a general feel of conditions.

The two major advantages of hand tabulation are that it saves the expense of designing and setting up complex tabulating systems, and it often reduces the turnaround time required from the time the last interview is completed until the data are tabulated.

Hand tabulation, however, does not eliminate the need for editing and coding, nor the thorough check-

ing procedures along the way. Even though there may be only a small number of questionnaires involved, editing instructions must be written and codes established to aid in tabulation.

The major drawback of hand tabulation is that it restricts, or limits, the amount of analysis that can be done with the data. If more than a few sub-groups are to be analyzed, it is more economical in the long run to punch the data into cards for mechanical tabulation. If the sub-groups that are to receive analysis are known in advance, it is possible to tabulate the data in a manner that will allow adding combinations of groups, rather than going back through and retabulating the entire study from the beginning. For example, if it has been determined that two sub-groups (length of stay and age of respondent) are to be analyzed, the questionnaires could be divided into four groups:

1. Persons who stayed less than a week and are under 35 years of age
2. Persons who stayed less than a week and are 35 or older
3. Persons who stayed a week or more and are under 35
4. Persons who stayed a week or more and are 35 or older

Tabulating the questionnaires by each of the four groups allows combinations to produce the desired analyses in one step; the sum of groups 1 and 2 are those who stayed less than a week, 3 and 4 are those who stayed a week or more, 1 and 3 are those under 35 years of age, and 2 and 4 are those 35 or older. The sum of the four individual groups results in the “total” sample.

Since hand tabulation is desirable only when small sample sizes are used, this limits the number of sub-groups that can be analyzed. While it is possible to break down a larger sample into six, eight, ten or more groups as in the example above, the sample sizes of the splinter groups may become, in the process, too small for meaningful analysis.

### Counter-Sorter

The second level of tabulation involves the use of mechanical tabulating equipment, a counter-sorter. After the cards are punched, verified, and cleaned,



they can be run through a machine that has the capability of counting and/or sorting them based on codes punched into the cards.

The major advantage of using a counter-sorter is its speed and accuracy, which encourages further analysis because of the ease in which additional breakdowns can be tabulated. The total sample size, however, must be large enough to provide a substantial base of the sub-groups that are to be tabulated before use of a counter-sorter is warranted.

One drawback to using a counter-sorter is that there may be a large number of cards involved. If some type of weighting is used in the sample design stages to effect economies in the field work, this is compensated for in the tabulation by applying weights to individual respondents. This is normally done by duplicating data cards, and depending upon what types of weights need to be applied, the total number of cards may become too large to make it practical to tabulate them with a counter-sorter.

## Computer

For studies that have large sample bases and employ sophisticated weighting techniques in the sample design, the computer offers the most practical method of tabulating the results.

Speed, accuracy, and the ability to analyze data in a number of different ways are the major benefits of computerization. The major drawback may be incurring additional costs, but when viewed in terms of the amount of data analyses possible, the cost per unit of usable information obtained could very possibly be less. Computerization is almost mandatory for major studies where there will be a great deal of detailed analyses.

A word of caution: computer programs used for tabulating marketing research data are significantly different from those in common use for such purposes as accounting. Therefore, the initial cost for developing programs is high, but if they are used frequently over a period of time, their expense may be justified.

The best approach is to seek out a data processing service with tabulation capacities and develop the computerization around their equipment and programs. The report format used by the data processing service may take some time to become familiar with, but the enormous savings more than compensate for the inconvenience.

Considerable thought should be given to investigating what types of services are available in the area, and what the cost would be, before there is any initial investment in developing computer programs.

# Chapter X

## ANALYSIS AND REPORTING

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### Analysis

Due to the speed and versatility of modern-day computer systems, more extensive analysis of basic data is possible than would normally be feasible if the tabulations had to be done by hand.

While it is often possible to establish in advance which additional cross tabulations will be most desirable (based on the objectives of the study), it may be necessary to wait until the basic tables are available and relationships become more apparent. The number and complexity of the cross tabulations will vary widely from study to study, based primarily on the sample size that is available, but the additional tabulations are most commonly determined by the target groups established in the objectives of the study.

Although computerization presents tremendous opportunities for data analysis, great care must be exercised in reporting results of sub-samples. As noted earlier, the degree of confidence placed on segments of the total sample is dependent upon the size of the sub-sample group, not the total sample.

Variables used in the analysis will differ, of course, depending upon the objectives of the study. If one of the objectives is to measure expenditures within the area, then length of stay, party size, and purpose of the visit are logical variables.

Seasonality, place of residence, and attitudes toward the area as a vacation spot may be more meaningful variables if the objective is to develop a nationwide marketing program.

Additional tabulations may be suggested by the findings after the basic analysis is completed using the most logical variables.

### Reporting

The most important consideration in determining the report format is the audience that will be using it. Keep the report clear and concise—avoid the temptation to overburden it with statistical language that is beyond the interest, or comprehension, of the reader.

Reports should include:

1. A brief description of the study methodology.
2. A summary of the conclusions.
3. Supplementary statistical tables as supporting evidence.

Many people find strictly numerical presentations of data difficult to comprehend. Therefore, the use of charts, illustrations and other graphical devices is recommended as a valuable tool for communicating ideas to the reader.

# Part 2 NON-RESIDENT AIR TRAVEL TO WASHINGTON STATE IN 1977

## INTRODUCTION

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This summary report is based on the findings of an air travel study conducted among non-resident air travelers in Washington State during calendar year 1977.

The study was done in conjunction with this manual which was written to provide guidance to regions, states, and cities in developing and conducting re-

search studies. The demonstration project contributed to the development of the manual guidelines and shows how primary research can be used to define, develop, and support marketing programs. In interpreting the findings, it should be borne in mind that the study covers *only* air travel, and therefore, one would expect that the characteristics, purpose of the trip, length of stay, and other variables measured, to differ significantly from overall travel patterns.

## THE STUDY IN BRIEF

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**UNIVERSE:** Non-resident air travelers visiting the state of Washington.

**PERIOD COVERED:** January - December 1977.

**METHOD:** Face-to-face interviews among enplaning passengers using a uniform questionnaire.

**RESPONDENTS:** Male and female head of travel party.

**SAMPLE DESIGN:** Probability design, using several stages of stratification, clustering of flights by time of departure, with the selection of one respondent from each travel party.

**SAMPLE SIZE:** 2,625 interviews, weighted to adjust properly for the number of interviews completed per flight and passenger load.

## SUMMARY OF FINDINGS

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- A total of 890,000 travel parties visited Washington State by commercial air lines during 1977.
- The average party size was 1.5 persons, or a total of 1,335,000 persons.
- The total contribution to the state's economy in 1977 was approximately \$224 million, or an average of about \$252 per travel party.
- The primary purpose of the trip for almost half (45 percent) was for business or convention/conference related reasons.
- Among total travel parties, seven out of every ten visited Seattle, about three out of every ten visited other places in King County, and six out of every ten visited places outside King County.
- The west coast states of California, Alaska, and Oregon accounted for four out of every ten visiting parties.
- About four out of every ten spent four nights or more in the state.
- About five out of every ten stayed in a hotel, motel, or tourist court on their visit, and about four out of every ten stayed with friends or relatives.
- About three out of every ten used a rental car for transportation within the state on their visit and an equal number used other types of commercial ground transportation.
- About seven out of every ten heads of parties are between 25 and 54 years of age.
- About five out of every ten heads:
  - Are in the professional, semi-professional, proprietor, manager or official occupation categories.
  - Have a college education.
  - Have annual incomes of \$20,000 or more.



# MAIN PURPOSE OF TRIP

Question: "Thinking of this trip, and by this trip I mean since you last entered the state of Washington, what was the one main purpose of this trip to Washington?"

	Total				Outside
	Parties	Percent	Seattle	King County	King County
Business or trade .....	357,000	40%	40%	39%	36%
Attend convention or conference.....	47,000	5	6	6	4
Visit friends or relatives.....	255,000	29	29	30	35
Pleasure or vacation .....	77,000	9	8	5	10
Sightseeing .....	10,000	1	2	—	1
Outdoor recreation (hunting, fishing, etc.) ..	6,000	1	1	1	1
Shopping .....	5,000	1	1	1	1
Entertainment (theater, spectator sports, etc.) .....	3,000	—	1	1	—
Visit specific attractions .....	—	—	—	—	—
Other personal or family affairs.....	50,000	6	5	4	6
Other purpose .....	74,000	8	7	13	6
Don't know, or no answer .....	6,000	—	—	—	—
Base: Total Travel Parties.....	890,000	100%	100%	100%	100%

# SECONDARY PURPOSE OF TRIP

Question: "What are some of the other purposes of this trip to Washington?"

	Total				Outside
	Parties	Percent	Seattle	King County	King County
Business or trade .....	20,000	2%	2%	3%	3%
Attend convention or conference.....	6,000	1	1	—	—
Visit friends or relatives.....	92,000	10	10	11	12
Sightseeing .....	88,000	10	12	11	11
Pleasure or Vacation .....	64,000	7	9	7	8
Shopping .....	21,000	2	3	2	3
Visit specific attractions .....	12,000	1	2	2	2
Other personal or family affairs.....	12,000	1	1	1	2
Outdoor recreation (hunting, fishing, etc.) ..	12,000	1	2	2	2
Entertainment (theater, spectator sports, etc.) .....	10,000	1	1	1	1
Other purpose .....	30,000	3	4	4	4
Don't know, or no answer .....	9,000	1	1	—	2
No other purpose.....	582,000	65	62	64	61
Base: Total Travel Parties.....	890,000	100%	100%	100%	100%

Note: Tables add to more than 100% because some people traveled for multiple purposes.



# PLACE OF RESIDENCE

Question: "In what state or country do you presently reside?"

	Total			King	Outside
	Parties	Percent	Seattle	County	King
					County
California .....	202,000	23%	24%	28%	22%
Alaska .....	101,000	11	13	13	10
Oregon .....	77,000	9	6	6	9
Montana .....	33,000	4	3	2	5
Canada .....	33,000	4	3	4	4
Minnesota .....	31,000	3	3	4	4
Texas .....	29,000	3	4	3	3
Idaho .....	29,000	3	2	2	3
Colorado .....	28,000	3	3	4	4
All other states with less than 25,000 parties .....	268,000	30	31	31	30
Outside United States (excluding Canada) ..	53,000	6	7	3	6
Unreported .....	6,000	1	1	—	—
Base: Total Travel Parties .....	890,000	100%	100%	100%	100%

# PLACES VISITED

	Total Travel Parties	
Seattle .....	620,000	70%
King County .....	226,000	25
Outside King County* .....	525,000	59
Base: Total Travel Parties .....	890,000	100%

Table adds to more than 100% because some visited more than one area.

\*Includes all counties in the remainder of the state.

# EXPENDITURES BY CLASSIFICATION

	Expenditures in Washington State (\$000)	Expenditures Per Party
Total .....	\$224,000	\$252
Food and refreshments .....	70,000	78
Recreation and entertainment .....	22,000	25
Lodgings and accommodations .....	48,000	54
Transportation fares (air-lines, bus, train, boat, rental car) .....	29,000	33
Gasoline, oil, tires, repairs .....	7,000	8
Other retail purchases or services .....	41,000	46
Other expenditures .....	7,000	8

# LENGTH OF STAY

Question: "On this trip, how many nights did you spend in . . .?"  
(Asked separately for each of the three areas visited.)

	Parties Visiting:		
	Seattle	King County	Outside King County
None .....	26%	42%	26%
One.....	22	19	18
Two .....	16	8	11
Three.....	11	6	9
Four .....	7	5	6
Five or more.....	18	18	29
Don't recall.....	—	2	1
Base: Total Parties Visiting Area .....	620,000	226,000	525,000

## Summary of Total Nights Spent in State

None .....	6%
One.....	23
Two .....	16
Three.....	13
Four .....	8
Five or more.....	34

# SUPPLEMENTARY TRANSPORTATION USED

Question: "What types of transportation did you use traveling in Washington on this trip?"

	Total		Seattle	King County	Outside King County
	Parties	Percent			
Private owned car.....	499,000	56%	56%	56%	63%
Rental car.....	243,000	27	28	34	29
Taxi, limousine, city bus.....	240,000	27	32	23	17
Boat .....	98,000	11	14	16	16
Commercial airplane .....	44,000	5	4	4	7
Commercial bus line .....	37,000	4	5	2	4
Chartered bus .....	8,000	1	1	1	1
Camper or recreation vehicle.....	6,000	1	1	—	1
Railroad .....	6,000	1	1	—	1
Private airplane .....	5,000	1	—	1	1
Other transportation .....	32,000	4	3	3	4
Don't know, or no answer .....	3,000	—	—	—	—
Base: Total Travel Parties.....	890,000	100%	100%	100%	100%

Tables add to more than 100% because some people traveled for multiple purposes.

# ACCOMMODATIONS USED

Question: "In what types of lodgings or accommodations did you stay while in Washington?"

	<u>Total</u>		<u>Seattle</u>	<u>King County</u>	<u>Outside King County</u>
	<u>Parties</u>	<u>Percent</u>			
Hotel, motel, tourist court .....	463,000	52%	55%	52%	46%
Home of friends or relatives .....	367,000	41	42	42	50
Tent, campground .....	9,000	1	1	1	2
Trailer, camper, recreational vehicle .....	7,000	1	1	1	1
Seasonal home, cabin .....	6,000	1	1	1	1
Resort, dude ranch .....	5,000	1	1	1	1
Tourist home .....	3,000	1	1	1	1
Car (not in campgrounds) .....	2,000	—	—	—	1
Other place .....	44,000	5	5	6	6
Don't know, or no answer .....	1,000	—	—	—	—
Base: Total Travel Parties .....	890,000	100%	100%	100%	100%

# PARTY SIZE

	<u>Total</u>		<u>Seattle</u>	<u>King County</u>	<u>Outside King County</u>
	<u>Parties</u>	<u>Percent</u>			
One .....	612,000	69%	67%	64%	69%
Two .....	203,000	23	24	25	22
Three .....	39,000	4	5	5	5
Four .....	18,000	2	2	3	1
Five – Nine .....	11,000	1	1	2	2
Ten or More .....	5,000	1	1	1	1
Unreported .....	2,000				
Total Persons in Travel Parties .....	1,335,000				
Average Party Size .....	1.50				

# DEMOGRAPHICS — HEAD OF TRAVEL PARTY

	<u>Total</u>		<u>Seattle</u>	<u>King</u>	<u>Outside</u>
	<u>Parties</u>	<u>Percent</u>		<u>County</u>	<u>King</u>
					<u>County</u>
<u>Age</u>					
Under 13 years.....	4,000	—%	1%	1%	1%
13–17 years.....	18,000	2	2	2	2
18–24 years.....	88,000	10	10	7	12
25–34 years.....	219,000	25	26	26	24
35–44 years.....	191,000	21	21	22	20
45–54 years.....	175,000	20	19	21	18
55–64 years.....	120,000	13	13	12	13
65 years or older .....	68,000	8	7	8	9
Unreported .....	7,000	1	1	1	1
<u>Occupation of Head of Household</u>					
Professional, semi-professional.....	278,000	31%	33%	30%	30%
Proprietor, manager, official.....	176,000	20	20	21	18
Clerical, sales .....	117,000	13	12	16	14
Craftsman, foreman .....	75,000	9	8	7	9
Service worker .....	30,000	3	3	3	4
Operative, non-farm laborer .....	36,000	4	4	3	4
Farm, farm laborer.....	12,000	1	2	1	1
Armed forces .....	34,000	4	3	5	4
Not in labor force (unemployed, on relief, welfare).....	32,000	4	4	4	4
Retired.....	72,000	8	8	8	9
Unreported .....	28,000	3	3	2	3
<u>Education</u>					
Graduate study.....	197,000	22%	24%	24%	20%
College graduate.....	267,000	30	31	30	28
Some college .....	182,000	21	21	23	22
High school graduate.....	162,000	18	16	14	19
Some high school .....	44,000	5	5	5	6
Eighth grade or less.....	29,000	3	2	3	4
Unreported .....	9,000	1	1	1	1
<u>Annual Household Income</u>					
\$35,000 or more .....	213,000	24%	27%	24%	20%
\$30,000–\$34,999 .....	81,000	9	9	10	8
\$25,000–\$29,000 .....	89,000	10	10	12	10
\$20,000–\$24,999 .....	99,000	11	10	12	11
\$15,000–\$19,999 .....	100,000	11	11	11	12
\$10,000–\$14,999 .....	70,000	8	7	8	9
\$5,000–\$9,999 .....	52,000	6	5	5	7
Under \$5,000 .....	25,000	3	3	2	3
Refused or unreported.....	161,000	18	18	16	20
<u>Sex of party head</u>					
Male.....	637,000	72%	73%	74%	68%
Female.....	253,000	28	27	26	32



## APPENDICES

# APPENDIX A

## Selected References

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# APPENDIX B

It is essential that you study these specifications carefully before you begin your work. You are paid for study time.

## INSTRUCTIONS FOR AIR PASSENGER TRAVEL SURVEY

### Washington Travel Study

Dear Interviewer:

Here is your assignment for the United States Travel Study that you have agreed to conduct for us.

Interviewing will be conducted in teams of two interviewers for each flight selected. The actual respondent selection from all enplaning passengers for the selected flights will be explained in detail later in these interviewing specifications.

It is very important that you schedule your other activities so that you will be available to work at the assigned time since the flights are selected at random and once the flight has departed, it cannot be worked at another time.

For any help you may need during the survey, call your Supervisor. If you are unable to contact your supervisor, call us immediately with your problem. All calls to us should be placed to Belden Associates, station-to-station collect, at area code 214, phone 522-8630 in Dallas. *After we accept charges*, ask for Linda Trenholm, or if she is not available ask for Paul White. Our office hours are 8:30 a.m. to 5:00 p.m. Monday through Friday.

If you foresee that you will not be able to work at the assigned time, notify your supervisor immediately. She will have to find someone else to complete the work assigned to you.

### CONFIDENTIAL

Naturally you will treat the results in confidence. You may assure the respondents that no individual answers will be revealed to anyone by you or by us. All our analyses will include only total figures. DO

NOT give a questionnaire to anyone, not even a blank one. Return all unused questionnaires—very important, as you will see.

## YOUR MATERIALS

Check now to see that all of this is enclosed:

1. *These Interviewing Specifications*—which you must study thoroughly before you make any interviews. If you have any questions, DON'T try to interpret what we mean—ask us.
2. *Assignment and Report Sheet*—This sheet is your billing form to us and provides a space for you to keep a record of your time and mileage. (Your supervisor may prefer that her form be used instead; if so, you will not receive a Belden billing form).
3. *Questionnaires*—These are the all-important forms on which appear the questions you will ask and on which you will write the replies. The questionnaires are numbered and **MUST** be used in the order in which they are numbered.
4. *Show Cards*—The cards are for you to use as directed during your interviews.
5. *Identification Card*—Supplied by Washington. This card *must* be returned each month when you have completed your work.
6. *Flight Assignment sheet*—which tells you which flight to work, the time you should reach the boarding area, the ID# which must be put on each questionnaire from that flight, and a place to record the total number of enplaning passengers for the flight.

## THE ASSIGNMENT AND REPORT SHEET

Please look at this form now (if you have received one). On the front appears your name, your interviewer number (*you use it for signing your name to questionnaires*). Then there is a place for you to keep an accurate record of your time, mileage, and authorized expenses.

Keep this record daily, as you work; accuracy is important so that you neither overcharge nor under-bill us. The times you record as starting and stopping on



each line should indicate actual hours working on the job. Carry the assignment and report sheet with you at all times. After you have completed your assignment, total your bill at the bottom of the sheet. For you to receive payment you must submit this bill, *initialed at the bottom*.

#### *This Is What We Pay For:*

- a. Time spent studying these specifications and becoming familiar with the interviewing materials and time spent at the training session, including time coming to and going from the session (*PROVIDED you are productive and complete the assignment*). You are paid for the time spent interviewing, including time going to and coming from the airport. We do pay for time you spend reading over completed questionnaires to be sure they will be clear and legible to us, but we do not pay for extensive editing time after the interview has been conducted. This editing time is not necessary when you have reported all information, as you should, during the actual interview itself. If you need to clarify words here and there so that they are legible, do so; but don't take time copying the whole questionnaire over.
- b. *Travel* for the use of your car, or reimbursement of public transportation fares. (We do not pay for car repairs or tolls—this is part of mileage allowance.) We will pay for bus fares, but *not* for the use of a taxi or to rent a car. We do *not* pay for meals, refreshments, or baby sitters. Authorized expenses are specified each time.

## WHEN TO INTERVIEW

Each Flight Assignment Sheet specifies the *day and date*, and the *time you should be at the boarding area*, along with the airline and flight number. The time to begin interviewing varies slightly from flight to flight, but is generally about 45 minutes before the scheduled departure time.

## WHERE TO INTERVIEW

All interviewing will be done in, or around, the designated boarding area for the selected flight. It is important that you interview only passengers on the flight, so do not attempt to complete interviews in other areas of the terminal since you could possibly contact non-qualified respondents.

Interviewers should station themselves behind, and to the left or right, of the desk where boarding passes are being handed out. If two lines are used, one interviewer should work one line and the other interviewer, the other line, contacting passengers as they pick up their boarding passes. If only one line is being used, both interviewers will work from the same line.

## WHOM TO INTERVIEW

Not everyone boarding the plane will be a qualified respondent and screening questions are built into the questionnaire to eliminate those who do not qualify.

In order to qualify, the respondent must be:

1. A non-resident of Washington State, and
2. The head of the travel party.

Persons who do not qualify include:

1. In-flight transfers (those who have only flown into the airport from another airport for the purpose of boarding the plane to continue to their destination).
2. Students from out-of-state who are attending school in Washington but consider their place of residence their home state.
3. Those who live outside the state but commute by air daily to a place of employment within Washington. (The business traveler who is in Washington frequently, but does not commute daily, is not included in this definition.)
4. Those who are *not* the head of the travel party. (The head of the travel party is the person who is responsible for the dollar expenditures during the trip.)

Selecting those you will contact to attempt an interview should proceed as follows:

1. Contact the first person who receives a boarding pass and interview him if he qualifies (as determined by screening questions 1a, 1b, and 2 on the questionnaire). If the first person does not qualify, you would attempt to interview the next person in line.

2. Once you have found the first qualified respondent, the amount of time that elapses between the time you begin the interview and complete it will allow some of those receiving a boarding pass to go through the line. It is not necessary to try to attempt to interview those people, simply pick the next person coming through the line.

## INTERVIEWING TECHNIQUES

On the questionnaire, the questions you are to read aloud are in Caps And Lower Case—Just Like What You Are Now Reading. INSTRUCTIONS TO YOU, WHICH YOU READ TO YOURSELF ARE USUALLY IN *ALL CAPS* LIKE THIS.

- 10a. Now, let me check. How many did you say are in your travel party?

1 (GO TO Q. 11).....①  
2 3 4 5 6 7 8 9  
10 OR MORE .....0  
DON'T KNOW, OR NO ANSWER .....X

In the above example, you read the question, but not the possible replies. Replies are usually marked by circling the correct number or letter opposite the respondent's reply, as the code "1" is circled above. Be sure to circle neatly, covering only one number or letter with each circle.

If you are in doubt about how to mark any reply, write it out and let us code it.

## OTHER (SPECIFY:)

The answer "OTHER (Specify:)" appears on some of the questions. When it does, there will be a line beside it or under it. This means we want you to write in any answers the respondent may give to you that have not been provided for you on the questionnaire. When the answer "OTHER" appears on a question that does not have "Specify" beside it and there is no line on which to write an answer, you are not expected to write in the actual answer but merely to circle the code for "OTHER."

## OTHER TYPES OF ANSWERS

On some questions there are response categories and codes such as "NO OTHER PURPOSES," "NO SCHOOLING," etc. Go through the questionnaire carefully and note when these codes appear so you will not leave a question blank because you may not

realize there is a place to record this type of an answer. Be careful that you do not confuse a "NONE" answer with "DON'T KNOW, OR NO ANSWER."

## THE QUESTIONNAIRE

The following pages explain how the questions are to be handled. **DO NOT ALLOW THE RESPONDENT TO READ THE QUESTIONNAIRE WHILE YOU ARE ASKING THE QUESTIONS.** To do so allows him to see possible replies and may confuse him.

At the top of the questionnaire, you are to record the ID#, the airport, the airline, and the flight number. The ID# can be found on the flight assignment sheet. This information will, of course, be the same for all questionnaires from a specific flight.

*Question 0*—Record the total number of persons in the travel party. If the party does not qualify, you can use the same questionnaire for the next party you contact and write in the response on the next line.

*Question 1a*—Washington residents are those people who live within the state and consider Washington their legal residence. Students attending a college or university within the state *are* considered residents. Note that we have also included this as a second check in Question 2, which will be discussed later.

*It is very important that the results of this question be recorded accurately.* For each person you contact before finding a qualified respondent, place a tally mark (///) in the space provided.

*Question 1b*—The *head* of the travel party is the person who is responsible for the trip expenditure. This could be either the male or female in the party.

If there is only one person in the party, he is the head. Additionally, there are no age limitations; for example, a 12-year-old traveling by himself is the head of the travel party.

If the person you contact is not the head of the party, ask who is, and attempt to locate him. If he is not readily available and it will hamper your efforts to get your quota of interviews for the flight, go on to another person. It is not necessary to tally the number, and we do not expect this situation to arise often.

*Question 2*—Note that the question asks for the main purpose of this trip to Washington. If the respondent gives more than one purpose, probe to determine the *main* reason.



In the lower right-hand section of responses, you will notice that we have included three classes of respondents which do not qualify which were described in detail earlier. Should the respondent fall into one of these classes, tally this in the appropriate space and attempt another contact.

Note that you can continue using the same questionnaire.

Again, it is very important that the number of persons screened out from being interviewed be tallied accurately.

Once you have determined that the person is a qualified respondent, write in the time in the upper right-hand corner of the questionnaire.

*Question 3*—This question asks for other purposes of the trip to Washington; multiple answers are possible.

If the trip was taken for only one purpose, be sure to circle the code for “NO OTHER PURPOSES”—Code N. Do not confuse this alternative with the NO ANSWER alternative that appears in the question.

*Question 4*—Be sure to write legibly and do not abbreviate. The letter “I” could stand for Idaho, Illinois, Iowa, or Indiana.

*Question 5*—There are some subtle differences between the pre-listed alternatives (such as COMMERCIAL BUS LINE and CHARTERED BUS), so be sure to study them carefully so you will be able to distinguish between them when the respondent gives his answer.

COMMERCIAL AIRPLANE (Code 4) applies only to flights the respondent has taken *WITHIN* the state since he arrived, not the flight they are boarding now to leave the state.

*Question 6*—Note that the question includes “visit or go through” and a separate space to write in the response has been included for each of the three geographical areas.

If “Seattle” is mentioned, you simply have to circle code 1 for the response. If Seattle is not mentioned, be sure to circle code 2 so we will know that the question has not been omitted.

You are being provided with a list of the cities, places, and attractions in King County to help iden-

tify those, which should be recorded in the space under “King County.” Places mentioned that are not in King County (or Seattle) should be recorded in the space under “Outside King County.”

If the respondent does not mention any places in King County probe to find out if he actually has visited any because a non-resident may not be familiar with those that are actually in King County and those that are not.

*Question 7a-c*—Ask the question only for those areas the respondent has visited or gone through on this trip as specified in Question 6.

*Question 7a*—The complete question reads “Thinking about . . .” through each of the alternatives listed. Record the amount in the space provided for each.

If the respondent is unable to break down the amount spent for each of the types of items, ask the question which appears by the word “INDEFINITE.” It is very important that you get as complete and accurate an answer as possible for these questions.

*Questions 7b and 7c*—These questions are handled the same as Question 7a except that you read the names of the places recorded above for King County and/or Outside King County in Question 6.

*Question 8*—Note that this question on the number of nights is asked only for the areas visited in Question 6.

As in questions 7b and 7c, you read the names of the places mentioned in King County and Outside King County.

Note the instruction to skip Question 9 if no nights were spent in any part of Washington.

*Question 9*—Multiple answers are allowed, so circle any that apply. As with Question 5, there are some subtle differences in the types of accommodations listed, so be aware of these differences.

*Question 10a*—This question refers to the total number of persons in the travel party on this trip. Circle the code that applies.

*Question 10b*—This question asks about the number of persons 18 or older in the travel party. The question is not asked if there is only one person in the



travel party, as indicated by the skip sign in Question 10a.

**Question 11**—Show the AGE GROUP EDUCATION CARD as you ask this question. This allows people to tell only their approximate age; if anyone is reluctant, show them that by picking a group of ages no one is asked to reveal their exact age. If he refuses his age, you estimate it and circle the code (but be sure the respondent does not notice you are doing this—some people don't like to have their ages even guessed at!) **DO NOT OMIT RESPONDENT'S AGE FROM ANY QUESTIONNAIRE.**

**Question 12**—Show Card again. Record the last grade of school completed by the respondent by circling the correct answer code.

**Question 13**—The head of household is the person who makes the most money. If you are interviewing someone in a household where two or more single adults live, the head of household is the respondent, unless the respondent tells you otherwise. If both a husband and a wife are retired and drawing pensions and social security, the husband is considered the head of household, and you should find out his former occupation in Question 14.

**Question 14**—For this question we want to know the particular or specific job the respondent does—"sell tickets for the airline," "supervises workers for a home builder," "operates a paper loading machine," "writes and edits a company newspaper." If the head of household is retired, we want to find out what his particular job was—what he did do.

**YOU MUST GET SPECIFIC ANSWERS HERE.** Here are some examples of answers which are *not* specific enough:

Operates a machine (what kind of machine?)

Is a salesman (what does he sell?)

Is an engineer (what type of engineer?)

**Question 15**—Use the income show card with this question, and have the respondent point out the income group for his household. Note that the income groupings listed on the card are broad enough so that no one will be revealing his actual income.

**Questions 16, 17, and 18**—It is important that you get the name, address, and telephone number of each respondent for verification purposes.

**Questions 19 through 22**—Fill in the information for sex of the respondent, date, time interview ended, and your interview number after completing each interview.

## SPECIAL SITUATIONS

On a few occasions when distribution of the boarding passes does not begin until later than expected, it may be that you will not be able to complete your quota of interviews. This might also occur if a large number of persons do not arrive at the boarding area until the last moment.

If this should happen, ask Questions 1a and 1b to screen for non-residents and also record the information for Questions 4, 16, 17, and 18.

## COMPLETING PAPER WORK FOR FLIGHT

After you have completed interviewing for each flight, one interviewer should complete filling out the information on the FLIGHT ASSIGNMENT SHEET. This includes:

1. Obtaining the total number of enplaning passengers from the attendant issuing boarding passes and recording it in the appropriate space.
2. Recording the number of completed interviews for the flight. (Count only those that are complete; do not include terminated interviews or SPECIAL SITUATIONS mentioned above.)
3. Indicate (by interviewer number) which interviewer completed the form.

After the FLIGHT ASSIGNMENT SHEET is completed, attach it to *all* questionnaires, including in complete interviews and special situations questionnaires, before returning it to your supervisor.

## SURVEY METHODOLOGY FOR AIR TRAVEL

The universe, or population to be studied, is total *non-resident* air travelers exiting the area. This definition excludes permanent residents of the area (including students), in-flight transfers, and persons who may be commuting to and from work on a regular basis by air.

### Sample Design Methodology

The sample is of a probability design, using several stages of stratification, and the selection of a single respondent from each travel party drawn into the sample.

If the area is served by a number of airports and some have low traffic volume, it will be necessary to evaluate these airports to determine whether the volume is significant enough to warrant the expense of including them in the study. It is recommended that airports representing less than five percent of the total traffic volume of the area be excluded.

While a fixed number of interviews is desirable for each flight, there will be times when the sample of qualified respondents falls below the specified number because there are not enough qualified respondents boarding the plane or disruptions in the normal flight schedules delay opening the boarding area to passengers.

For airports served by airlines that operate equipment accommodating large passenger loads, it is possible to average about eight qualified respondents per flight if the goal is set at twelve completed interviews. For airports using smaller equipment, the average number of qualified respondents per flight will be less since passenger loads are smaller.

It is necessary to consult with airport authorities to determine the average size of the passenger load before it is possible to establish how many interviews with qualified individuals can be expected (about 30 percent of the total number of enplaning passengers will qualify).

The number of interviews from each airport should be approximately proportionate to the number of enplaning passengers accounted for by that airport.

## Determining the Number of Flights to be Sampled

The determination of the number of flights to be sampled is based on the sample size. The determination of the sample size for the survey should be undertaken by a person familiar with statistical sampling techniques. Assistance may be obtained from consultants or academic institutions.

One of two approaches may be used in determining the number of flights to be sampled:

1. If a fixed sample size has been established, simply divide the sample size by the number of qualified interviews expected per flight. (For example, if the desired sample size is 3,000 and the average number of qualified interviews per flight is expected to be 8, a total of 375 flights would be sampled throughout the survey period.)
2. If the scope of the study is determined not by sample size, but by budget, determine the estimated interviewing costs per flight (using estimates furnished by interviewing services, plus the additional expenses you may incur, such as parking fees) and divide the cost per flight by the amount of the budget allocated to field work. (For example, if the estimated average cost per flight is \$30.00 and the budget for field work is \$15,000, a total of 500 flights can be sampled. If the number of flights that can be sampled under the available budget is relatively low, then this will limit the extent of the analysis of the data.)

After the total number of flights that will be sampled during the survey period has been established, determine the number to be sampled each month. For example, if 300 flights are to be sampled over a 12-month period, 25 would be sampled each month.

Since the number of flights sampled on a month-by-month basis probably is not large enough to warrant interviewing every day, randomly select a week from the first month and advance the week by one for each of the following months. For example, if the second week in January is chosen, the third week would be used for February, the fourth week for March, the first week for April, the second week for May, and so on. The weekly schedule should be set up for the entire interviewing period so that seasonal holiday peri-



ods will be represented in their proper proportion. It would be improper, for example, to include or exclude all weeks containing such holidays as New Year's Day, Independence Day, Labor Day, Thanksgiving, and Christmas. It may be necessary to make some adjustments to the schedule if the original random selection does not produce holiday periods in their correct proportion.

## Selection of Sampled Flights

The Official Airline Guide (OAG), available through R. H. Donnelley Corp., lists inbound flights by airport. Using the most current issue of the guide, consult the listings for each airport included in the sample, and determine the flights for which that airport is the final point of departure from the survey area. The OAG lists inbound flights to the airport, so it is necessary to work backwards to determine departing flights. Due to departure schedule changes throughout the survey period, and changes in the number of flights during peak seasons, it is necessary to update the list of flights before each month of interviewing.

After the complete list of departing flights for each airport has been compiled, the flights are arrayed in chronological order throughout the day. The number of regularly-scheduled flights is then divided by seven (the number of days) to establish an interval for which flights are to be selected. For example, if there are 120 scheduled flights leaving each day, the interval would be 17. The next step is to select a random number between 1 and 17 as a starting point and then accumulate flight departure times throughout the day to determine which flight will be selected as the primary flight for each day. If the randomly-selected flight in the above example had been the seventh (early in the morning), the flight selection would be the 7th, the 24th, the 41st, the 58th, and so on until seven flights are selected.

The selected flights are next randomly assigned by day of the week so that the Sunday assignment might be the 58th flight, the Monday flight the 24th, and so on.

Once the primary flight for each day has been selected, choose additional flights departing about one hour later throughout the day until the number of flights for that day have been selected. For example, if you need four flights that day and if the primary

flight departed at 3:40 p.m., the additional flights would be those that leave closest to 4:40 p.m., 5:40 p.m. and 6:40 p.m. Scheduling the flights in this manner allows more efficient use of interviewers because they do not have to travel back and forth to and from the airport throughout the day, which could happen if each flight had been selected at random. The additional flights actually retain their "randomness" since the primary flight was selected at random.

After the original sample of flights has been chosen, the selected flights should be checked to see how well they match the distribution of total flights by destination for large geographic areas and by airline. For example, if 20 percent of the total flights have their first stop somewhere in a group of states in the southeastern United States, approximately 20 percent of the flights chosen should also have their first stop within the area.

If the sample of selected flights does not produce the proper distribution, some substitutions may be required. While the distribution by airline is not as critical, all carriers should be represented in the sample throughout the survey period.

Since it is unlikely that the number of flights to be sampled each month will be equally divisible by the seven days in the week (in the above example, 25 divided by 7 produces 3.6), the schedule should also be carried out on a day-by-day basis so it will be balanced by day overall. In the above example, the number of flights sampled would be alternated between three and four per day. By the end of the study each of the seven days of the week should have been sampled by the same number of flights.

All flights per sampled day are selected with equal probability, a fixed number of completed interviews with qualified respondents is established for each flight, and varying passenger loads per flight are taken into account in the tabulation.

## Field Staff Requirements

Since there usually is not much time between the opening of the boarding area and the flight departure, two interviewers should be assigned to work each flight. Even if the questionnaire takes only a few minutes to administer, each interviewer can be expected to complete a maximum of five or six interviews per flight during the limited time available.



Assigning two interviewers to work each flight also has the advantage of providing a "back-up" in the event an emergency comes up that prevents one from being available. While such an occurrence will probably prevent the desired number of interviews from being obtained for that flight, at least the flight will be represented in the sample and can still be used in tabulation.

## Field Materials

Field materials consist of recording forms, questionnaires, and show cards. A complete set of example field materials is included in this appendix; preparation of materials and interviewer training are discussed in Chapters VI and VII.

## Respondent Selection

Under ideal conditions, respondents are selected as they obtain their boarding passes. A random selection procedure can be established by choosing the first person coming through the line. After the person has been interviewed (or it has been determined that he is not a qualified respondent), the next person to pick up a boarding pass is selected.

In actual practice, it may be necessary to provide an alternate method of selecting respondents, as described below; often the boarding area does not open early enough to permit contacting all enplaning passengers. In those instances in which the person issuing boarding passes does not show up at least 30

minutes before flight time, the following alternative procedure is recommended in selecting respondents:

1. Enter the boarding area and contact the first person to your *right* in order to start interviewing.
2. If the person is a qualified respondent, interview him. If not, continue working to your right until you have interviewed one respondent.
3. After completing the interview, contact the next person who comes into the boarding area and continue selecting respondents as if they were in a line waiting for boarding passes; that is, contact each person entering the boarding area until you find a qualified respondent, and after you have completed the interview, contact the next person entering the boarding area.

After the interviewing is completed for the flight, and before the field staff proceeds to the next flight, one interviewer must obtain the total number of enplaning passengers for the flight from the flight attendant.

## Determining Visitor Volumes, Expenditures and Characteristics

The information obtained from the survey will provide the basis for determining the number of visitors to an area, their expenditures and characteristics. Due to the complexity of this tabulation, it is recommended that assistance be obtained from a consultant or person at an academic institution. This person can also assist in advising on the level of detail that can be included in the analysis, based on the sample size.

### SHOW CARDS\*

#### EDUCATION

GRADUATE STUDY	(1)
COLLEGE GRADUATE	(2)
SOME COLLEGE	(3)
HIGH SCHOOL GRADUATE	(4)
SOME HIGH SCHOOL	(5)
8th GRADE OR LESS	(6)
NO SCHOOLING	(7)

#### AGE GROUPS

UNDER 13	(1)
13-17	(2)
18-24	(3)
25-34	(4)
35-44	(5)
45-54	(6)
55-64	(7)
65 OR OLDER	(8)

#### TOTAL FAMILY INCOME

<u>By the Week</u>	<u>By the Month</u>	<u>By the Year</u>	
Under \$96 a week	Under \$417 a Month	Under \$5,000 a Year	(1)
\$97 to \$192	\$418 to \$833	\$5,000 to \$9,999	(2)
\$193 to \$288	\$834 to \$1,250	\$10,000 to \$14,999	(3)
\$289 to \$384	\$1,251 to \$1,666	\$15,000 to \$19,999	(4)
\$385 to \$481	\$1,667 to \$2,083	\$20,000 to \$24,999	(5)
\$482 to \$577	\$2,084 to \$2,499	\$25,000 to \$29,999	(6)
\$578 to \$673	\$2,500 to \$2,916	\$30,000 to \$34,999	(7)
\$674 or more a Week	\$2,917 or more a Month	\$35,000 or more a Year	(8)

\*Used for all modes of transport.

# ASSIGNMENT AND REPORT SHEET

Interviewer: \_\_\_\_\_ Place: \_\_\_\_\_ Date: \_\_\_\_\_ Job #: \_\_\_\_\_

Your Interviewer Number Is: \_\_\_\_\_ DEADLINE—Mail work by: \_\_\_\_\_

YOUR ASSIGNMENT: \_\_\_\_\_

## YOUR REPORT:

### TIME AND MILEAGE RECORD

Date	Hours Worked	Total Hours	Speedometer Readings	Total Miles	Other Expenses	Area Number	Number of Interviews Completed
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				
	From: _____ To: _____		Start: _____ End: _____				

TOTALS ..... Hours Miles Expenses Interviews

GUARNATEE: I certify I read the interviewing specifications for this job before I began interviewing; I have conducted the interviews to the best of my ability; I attest all interviews and charges are true and honest; I agree to receive payment as an independent contractor, and only for work that comes up to standard; I will keep all interviews confidential.

SIGNED: \_\_\_\_\_  
Send check to: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

## YOUR BILL:

Total Hours: \_\_\_\_\_ at \$ \_\_\_\_\_ per hour .....\$ \_\_\_\_\_

Total Miles: \_\_\_\_\_ at \$ \_\_\_\_\_ per mile .....\$ \_\_\_\_\_

Bus or car fares .....\$ \_\_\_\_\_

Other authorized expenses—List:  
\_\_\_\_\_ \$ \_\_\_\_\_

Total owed me .....\$ \_\_\_\_\_

For Office Use: Cost per interview .....\$ \_\_\_\_\_

( ) High ( ) Medium ( ) Low



# FLIGHT ASSIGNMENT SHEET

Job: \_\_\_\_\_

Interviewer Numbers:

\_\_\_\_\_ and \_\_\_\_\_

ID#: \_\_\_\_\_

FLIGHT NUMBER: \_\_\_\_\_

DAY AND DATE: \_\_\_\_\_

REACH BOARDING AREA BY: \_\_\_\_\_ a.m.  
p.m.

TOTAL NUMBER OF ENPLANING PASSENGERS FOR THIS FLIGHT: \_\_\_\_\_

NUMBER OF COMPLETED INTERVIEWS FOR THIS  
FLIGHT: \_\_\_\_\_

FORM COMPLETED BY: \_\_\_\_\_  
(Interviewer Number)

ATTACH THIS SHEET TO QUESTIONNAIRES FOR THIS FLIGHT BEFORE  
RETURNING IT TO YOUR SUPERVISOR .

# QUESTIONNAIRE AIR PASSENGER SURVEY\*

0. How many persons altogether, including yourself and babies, are traveling in your party on this trip? (WRITE IN NUMBER IN TRAVEL PARTY:)

1a. Are you a resident of the state of Washington? YES (TERMINATE INTERVIEW AND TALLY:)  
NO (GO TO Q. 1b)

b. Are you the head of your travel party? YES (GO TO Q. 2)  
NO (ATTEMPT TO LOCATE: TERMINATE INTERVIEW IF YOU CANNOT AND TALLY:)

2. Thinking of this trip, and by this trip I mean since you *last entered* the state of Washington, what was the one *main* purpose of this trip to Washington?

ATTEND CONVENTION OR CONFERENCE.....	1	SHOPPING .....	9	
BUSINESS OR TRADE.....	2	OTHER PERSONAL OR FAMILY AFFAIRS.....	0	
PLEASURE OR VACATION.....	3	OTHER (Specify:)	X	
OUTDOOR RECREATION (HUNTING, FISHING, ETC.).....	4	DON'T KNOW, OR NO ANSWER.....	Y	6
ENTERTAINMENT (THEATER, SPECTATOR SPORTS, ETC.).....	5	IF ANY OF THE BELOW, TERMINATE AND TALLY HERE: .....		
SIGHTSEEING.....	6	TRANSFER FLIGHT		
ATTRACTIONS (Specify:)	7	STUDENT ATTENDING SCHOOL IN WASHINGTON		
VISIT FRIENDS OR RELATIVES .....	8	COMMUTES TO WORK IN STATE, BUT LIVES OUTSIDE STATE		

3. What are some of the other purposes of this trip in Washington?

ATTEND CONVENTION OR CONFERENCE.....	1	SIGHTSEEING .....	6	
BUSINESS OR TRADE.....	2	ATTRACTIONS (Specify:)	7	
PLEASURE OR VACATION.....	3	VISIT FRIENDS OR RELATIVES.....	8	
OUTDOOR RECREATION (HUNTING, FISHING, ETC.).....	4	SHOPPING .....	9	7
ENTERTAINMENT (THEATER, SPECTATOR SPORTS, ETC.).....	5	OTHER PERSONAL OR FAMILY AFFAIRS.....	0	
		OTHER (Specify:)	X	
		DON'T KNOW, OR NO ANSWER.....	Y	
		NO OTHER PURPOSE .....	N	

4. In what state or country do you presently reside?

(SPECIFY STATE OR COUNTRY:) 8-12

5. What types of transportation did you use traveling in Washington on this trip?

PRIVATELY OWNED CAR .....	1	TAXI, LIMOUSINE, CITY BUS .....	7	
RENTAL CAR .....	2	COMMERCIAL BUS LINE .....	8	
CAMPER OR RECREATIONAL VEHICLE.....	3	CHARTERED BUS .....	9	13
COMMERCIAL AIRPLANE.....	4	BOAT .....	0	
PRIVATE AIRPLANE.....	5	OTHER (Specify:)	X	
RAILROAD.....	6	DON'T KNOW, OR NO ANSWER.....	Y	

	SEATTLE	KING COUNTY	OUTSIDE KING COUNTY
6. What cities or places in the state of Washington did you visit or go through on this trip? (IF KING COUNTY NOT MENTIONED, PROBE.)	YES ..... 1 NO ..... 2		
7a. (IF VISITED SEATTLE, ASK:) Thinking about your visit in Seattle, how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ? (IF UNDECIDED:) Well, just your best guess.	14	24,25	35, 36
Food and refreshments.....	\$ 15	\$ 26	\$ 37 46
Recreation and entertainment .....	\$ 16	\$ 27	\$ 38 47
Lodging and accommodations.....	\$ 17	\$ 28	\$ 39 48
Airline, bus, train, boat, rental car transportation fares.....	\$ 18	\$ 29	\$ 40 49
Gasoline, oil, tires, repairs.....	\$ 19	\$ 30	\$ 41 50
Other retail purchases or services.....	\$ 20	\$ 31	\$ 42 51
Anything else? .....	\$ 21	\$ 32	\$ 43 52
INDEFINITE: Well, what is your best guess for the total amount spent? .....	\$ 22	\$ 33	\$ 44 53
TOTAL	\$ 23	34	45 54
b. (IF VISITED KING CO. ASK:) Thinking about your visit in (PLACES LISTED IN KING COUNTY) how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ?			
c. (IF VISITED OTHER AREAS IN WASHINGTON, ASK:) Thinking about your visit in (OTHER PLACES IN WASHINGTON), how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ?			
8. ASK ONLY FOR AREAS VISITED IN Q. 6:	NUMBER OF NIGHTS	NONE	DON'T KNOW, NO ANSWER
On this trip, how many nights did you spend in			
(the city of Seattle)? .....SEATTLE	55	0	Y
(places listed in King County)? .....KING CO.	56	0	Y
(other places in Washington)? .....WASHINGTON	57	0	Y
(IF NO NIGHTS SPENT IN ANY AREA, GO TO Q. 10a) TOTAL	58		

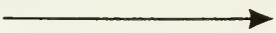


9. In what types of lodgings or accommodations did you stay while in Washington?		
HOTEL, MOTEL, TOURIST COURT..... 1	TENT, CAMPGROUND..... 6	59
RESORT, DUDE RANCH..... 2	CAR (NOT IN CAMPGROUND)..... 7	
TOURIST HOME..... 3	HOME OF FRIENDS OR RELATIVES..... 8	
SEASONAL HOME..... 4	OTHER (Specify: )..... 9	
TRAILER, CAMPER, RECREATION	DON'T KNOW, OR NO ANSWER..... 0	
VEHICLE..... 5		
<hr/>		
10a. Now, let me check, how many did you say are in your travel party?	1 (GO TO Q. 11)..... 1	60
	2 3 4 5 6 7 8 9..... 0	
	10 OR MORE..... 0	
	DON'T KNOW, OR NO ANSWER..... X	
<hr/>		
b. And how many persons 18 years or older, including yourself, are traveling in your party on this trip?	NUMBER: .....	61
	DON'T KNOW, OR NO ANSWER..... Y	
<hr/>		
11. (SHOW AGE CARD) Please show me into which age group you fall. (IF REFUSED, ESTIMATE AND CIRCLE CODE.)	UNDER 13..... 1 35-44..... 5	62
	13-17..... 2 45-54..... 6	
	18-24..... 3 55-64..... 7	
	25-34..... 4 65 OR OLDER..... 8	
<hr/>		
12. (SHOW EDUCATION CARD) Please point out the last grade of school you completed.		63
GRADUATE STUDY..... 1	SOME HIGH SCHOOL..... 5	
COLLEGE GRADUATE..... 2	8TH GRADE OR LESS..... 6	
SOME COLLEGE..... 3	NO SCHOOLING..... 7	
HIGH SCHOOL GRADUATE..... 4	NO ANSWER..... 8	
<hr/>		
13. Who is the head of your household?	RESPONDENT..... 1	64
	OTHER HOUSEHOLD MEMBER..... 2	
<hr/>		
14. What is the occupation of the head of your household? IF RETIRED, CHECK HERE <input type="checkbox"/> AND ASK FOR <u>FORMER</u> OCCUPATION.	OCCUPATION:	65
<hr/>		
15. (SHOW INCOME CARD) Will you point out which of these groups best describes the total annual income of your household before taxes?	LESS THAN \$5,000 ... 1 \$25,000-\$29,999..... 6	66
	\$5,000-\$9,999..... 2 \$30,000-\$34,999..... 7	
	\$10,000-\$14,999..... 3 \$35,000 OR	
	\$15,000-\$19,999..... 4 MORE..... 8	
	\$20,000-\$24,999..... 5 DON'T KNOW, OR	
	NO ANSWER... 9	
	REFUSED..... 0	
<hr/>		
16. May I please have your name in case the research company wants to check my work?	NAME:	

17. And your home address is:	ADDRESS: CITY:	ZIP CODE:
18. And your home telephone number:	AREA CODE: REFUSED ..... X	PHONE #: NO PHONE ..... Y

Thank you very much. Have a pleasant trip!

AFTER COMPLETING INTERVIEW, BUT BEFORE GOING TO THE NEXT PERSON, FILL OUT BELOW:

19. SEX OF RESPONDENT: MALE..... 1 FEMALE..... 2  67

20. DATE: 68, 69

21. TIME ENDED: \_\_\_\_\_ AM  
PM

22. INTERVIEWER NUMBER: 70, 71

ID#:	<b>72-75</b>	Airport	Airline	Flight	Number	_____
------	--------------	---------	---------	--------	--------	-------

Note: The numbers in boldface indicate which columns are to be punched on the computer card as the data are coded.

\* The actual size of the questionnaire should be one page with the dimensions 8½" x 14". Questions 1 through 8 should be put on the front page and the remaining questions should be put on the back side of the page.

# APPENDIX C

## INSTRUCTIONS FOR HIGHWAY TRAVEL SURVEY

### Washington Travel Study

#### WHEN TO INTERVIEW

Each Highway Traffic Assignment Sheet specifies the date and the time you should arrive to help prepare the station for interviewing.

#### WHERE TO INTERVIEW

All interviewing will be done at interviewing stations established at the side of the highway. The assignment sheet also indicates the location of the station.

An employee of the State Highway Department will be present to act as a flagman and to help with setting up the station. Warning signs and traffic control devices will be available to ensure your physical safety.

The station will be manned by two interviewers who do the actual interviewing and one traffic counter.

#### WHOM TO INTERVIEW

The flagman will select out-of-state non-commercial passenger vehicles for you to interview. You will interview the head of the travel party in each of these vehicles. But not every out-of-state vehicle will qualify, so screening questions are built into the questionnaires to eliminate those who do not qualify.

In order to qualify, the respondent must be:

1. A non-resident of Washington State
2. The head of the travel party

Persons who do not qualify include:

1. Washington residents
2. Students from out of state who are attending school in Washington, but consider their place of residence their home state.

3. Those who live outside the state, but commute daily to a place of employment within Washington. (The out-of-state business traveler who is in Washington frequently, but does not commute daily, is not included in this definition).
4. Those who are *not* the head of the travel party. (The head of the travel party is the person who is responsible for the dollar expenditures during the trip.)

The flagman will direct the first out-of-state passenger vehicle to the interview point. Interview the head of that travel party if he qualifies (as determined by the screening questions on the questionnaire.) If that person does not qualify, record the reason on the **TRAFFIC COUNTING SHEET** and signal the flagman that you are ready for him to stop the next out-of-state passenger vehicle passing the station.

#### THE QUESTIONNAIRE

The following pages explain how the questions are to be handled. **DO NOT ALLOW THE RESPONDENT TO READ THE QUESTIONNAIRE WHILE YOU ARE ASKING THE QUESTIONS.** To do so allows him to see possible replies and may confuse him.

At the top of the questionnaire, you are to record the exit number and the highway number which can be found on the yellow **TRAFFIC COUNTING SHEET**. This information will, of course, be the same for all questionnaires from a specific interviewing site.

*Question 1a*—Washington residents are those people who live within the state and consider Washington their legal residence. Students attending a college or university within the state *are* considered residents. Note that we have also included this as a second check in Question 2, which will be discussed later.

*It is very important that the results of this question be recorded accurately.* For anyone you contact before finding a qualified respondent, place a tally mark (////) in the space provided on the **TRAFFIC COUNTING SHEET**.

*Question 1b*—The *head* of the travel party is the person who is responsible for the trip expenditures. This could be either the male or female in the party.

If there is only one person in the party, he is the



head. If the person you contact is not the head of the party, ask who is, and interview him.

*Question 2*—Note that the question asks for the main purpose of this trip to Washington. If the respondent gives more than one purpose, probe to determine the *main* reason.

In the lower right-hand section of responses, you will notice that we have included two classes of respondents which do not qualify which were described in detail earlier. Should the respondent fall into one of these classes, tally this in the appropriate space on the TRAFFIC COUNTING SHEET and signal the flagman to send in another vehicle. Again, it is very important that the number of persons screened out from being interviewed be tallied accurately. The sum of tally marks for the four types who are excluded should equal the total number of vehicles stopped.

Note that you can continue using the same questionnaire.

*Question 3*—This question asks for other purposes of the trip to Washington; multiple answers are possible.

If the trip was taken for only one purpose, be sure to circle the code for “NO OTHER PURPOSES”—Code N. Do not confuse this alternative with the NO ANSWER alternative that appears in the question.

*Question 4*—Be sure to write legibly and do not abbreviate. The letter “I” could stand for Idaho, Illinois, Iowa, or Indiana.

*Question 5*—There are some subtle differences between the pre-listed alternatives (such as COMMERCIAL BUS LINE and CHARTERED BUS), so be sure to study them carefully so you will be able to distinguish between them when the respondent gives his answer.

*Question 6*—Note that the question includes “visit or go through” and a separate space to write in the response has been included for each of the three geographical areas.

If “Seattle” is mentioned, you simply have to circle code 1 for the response. If Seattle is not mentioned, be sure to circle code 2 so we will know that the question has not been omitted.

You are being provided with a list of the cities,

places, and attractions in King County to help identify those, which should be recorded in the space under “King County.” Places mentioned that are not in King County (or Seattle) should be recorded in the space under “Outside King County.”

If the respondent does not mention any places in King County probe to find out if he actually has visited any because a non-resident may not be familiar with those that are actually in King County and those that are not.

*Questions 7a-c*—Ask the question only for those areas the respondent has visited or gone through on this trip as specified in Question 6.

*Question 7a*—The complete question reads “Thinking about . . .” through each of the alternatives listed. Record the amount in the space provided for each.

If the respondent is unable to break down the amount spent for each of the types of items, ask the question which appears by the word “INDEFINITE.” It is very important that you get as complete and accurate an answer as possible for these questions.

*Questions 7b and 7c*—These questions are handled the same as Question 7a except that you read the names of the places recorded above for King County and/or Outside King County in Question 6.

*Question 8*—Note that this question on the number of nights is asked only for the areas visited in Question 6.

As in Questions 7b and 7c, you read the names of the places mentioned in King County and Outside King County.

Note the instruction to skip Question 9 if no nights were spent in any part of Washington.

*Question 9*—Multiple answers are allowed, so circle any that apply. As with Question 5, there are subtle differences in the types of accommodations listed, so be aware of these differences.

*Question 10a*—This question refers to the total number of persons in the travel party on this trip. Circle the code that applies.

*Question 10b*—This question asks about the number 18 or older in the travel party. The question is not

asked if there is only one person in the travel party, as indicated by the skip sign in Question 10a.

**Question 11**—Show the AGE GROUP/EDUCATION CARD as you ask this question. This allows people to tell only their approximate age; if anyone is reluctant, show them that by picking a group of ages no one is asked to reveal their exact age. If he refuses his age, you estimate it and circle the code (but be sure the respondent does not notice you are doing this—some people don't like to have their ages even guessed at!) **DO NOT OMIT RESPONDENT'S AGE FROM ANY QUESTIONNAIRE.**

**Question 12**—Show Card again. Record the last grade of school completed by the respondent by circling the correct answer code.

**Question 13**—The head of household is the person who makes the most money. If you are interviewing someone in a household where two or more single adults live, the head of household is the respondent, unless the respondent tells you otherwise. If both a husband and a wife are retired and drawing pensions and social security, the husband is considered the head of household, and you should find out his former occupation in Question 14.

**Question 14**—For this question we want to know the particular or specific job the respondent does—"sell tickets for the airline," "supervises workers for a home builder," "operates a paper loading machine," "writes and edits a company newspaper," and the like. If the head of household is retired, we want to find out what his particular job was—what he did do. **YOU MUST GET SPECIFIC ANSWERS HERE.** Here are some examples of answers which are *not* specific enough:

Operates a machine (what kind of machine?)  
Is a salesman (what does he sell?)  
Is an engineer (what type of engineer?)

**Question 15**—Use the income show card with this question, and have the respondent point out the income group for his household. Note that the income groupings listed on the card are broad enough that no one will be revealing his actual income.

**Questions 16, 17, and 18**—It is important that you get the name, address, and telephone number of each respondent for verification purposes.

**Questions 19 through 22**—Fill in the information for sex of the respondent, date, time interview ended,

and your interviewer number after completing each interview and tally in the "Interviewed" space on the TRAFFIC COUNTING SHEET.

## TRAFFIC COUNTER

The task of the traffic counter is to tally (using mechanical counting devices) the number of vehicles that pass the station during the interviewing time period, as indicated by license plate identification.

One Counting device will be used for non-qualified vehicles, which include:

1. Autos with Washington state plates.
2. Official vehicles (highway patrol cars, highway department vehicles, and military vehicles).
3. Public vehicles (commercial buses, cabs).
4. Commercial vehicles, such as trucks.

The other counting device will be used for qualified vehicles, which include autos, vans, pickups, motorized recreational homes, and motorcycles with out-of-state plates.

The traffic counter is also responsible for completing the TRAFFIC COUNTING SHEET, including:

1. Time interviewing started.
2. Time interviewing stopped.
3. Number of non-qualified vehicles.
4. Number of qualified vehicles.

**NOTE:** The number of interviewed, refused, local, and Washington residents will have already been tallied by the interviewers.

## SURVEY METHODOLOGY FOR HIGHWAY TRAVEL

The universe, or population to be studied, is total *non-resident* auto travelers exiting the area. This definition excludes commercial vehicles, government-owned vehicles, persons commuting across the boundary line to and from work, and students living within the state.

### Sample Design Methodology

The sample is of probability design, using several stages of stratification, and selection of a single re-



spondent from each travel party (auto) drawn into the sample.

## Selection of Highway Exits

Prior to selecting the individual highway exits that will be included in the survey, it is necessary to determine the average daily traffic count for each exit at the boundary of the survey area. All state highway departments collect total traffic flow information at various points throughout the state and its borders. Some also have data available based on manual counts that establish a ratio between resident and non-resident traffic.

However, if the survey area boundaries do not follow state lines, and no traffic flow data are available for highways at the survey boundaries, an additional step is required to obtain this information which is used both in the sample selection stage and for projecting the results of the survey. This can be accomplished either through manual counts or contracting with the state highway department for an independent count.

Most average daily traffic counts normally include traffic traveling in both directions, but some may report traffic for only one direction, so it is important to keep this distinction in mind when using traffic flow data. Although the data are based on two-way traffic, the information is still viable because there is the assumption that traffic entering the survey area will leave at some later date.

The average daily traffic counts provide the basis for selecting exits that will be included in the sample, and all exits with two percent or more of the total traffic from the survey area will normally be included in the basic sample frame.

Two different sampling strategies can be employed in determining the number of interviews that will be collected at each point throughout the survey period. One method uses the normal volume of traffic through each point as the basis for sample distribution. By this method, more interviewing hours are devoted to those points with higher traffic volume. The second method, however, devotes an equal number of interviewing hours to each of the selected exit points regardless of the traffic volume; differences in traffic volume are taken into account in the process called weighting. Weighting is the procedure by

which each value is given its proper relative importance.

When selection is done proportionate to traffic volume, all highway exits from the survey area are arrayed in descending order of traffic volume and all high-volume exits will automatically be included in the sample. Low-volume exits will be sub-sampled throughout the survey period, using a sampling interval obtained by dividing traffic volume by the number of exits, with probability proportionate to volume.

If the second method is used, all exit points have an equal probability of being selected into the sample, regardless of traffic volume, and are normally arrayed based on their geographic location, that is, by starting at one point and working around the perimeter of the survey area. In the tabulation, more weighting is required with this method to bring the high-volume highways into their proper proportion.

Regardless of which method is used, from this point, days of the week and hours of the day are sampled so that all days (including weekends) and all daylight hours are included.

Days of the week are rotated so that each exit is sampled on different days throughout the survey period.

Daylight hours are sampled so that all hours will be included. Interviewing hours are staggered so that all hours are covered using fixed-length (in hours) interviewing periods.

Theoretically, all hours of the day and night should be sampled, but this is not feasible due to the danger interviewers would face working after dark. The alternative is to divide the day into three 3-hour segments of 8-11 a.m., 11 a.m.-2 p.m., and 2-5 p.m. This method provides a reasonable amount of time to conduct field work; shorter interviewing hours would mean that a larger proportion of the time is spent in setting up the interviewing station, which is non-productive in terms of obtaining interviews, and a longer period of time would place hardships on the field staff.

Regardless of which method is chosen, it is necessary to project the interviewing schedule throughout the entire survey period to be sure that the selection:

1. Represents all days of the week in their proper proportion.
2. Includes interviewing at different times of the day in the proper proportion.



The basis for this selection will normally be quarters throughout the survey period if the entire period covers a full year.

## **Determining the Number of Interviewing Segments Required**

The number of interviewing segments that will be needed depends upon:

1. The length of the questionnaire (it should not be more than six to eight minutes).
2. The volume of non-resident traffic that can be expected through the interviewing point.
3. The physical characteristics of the interviewing site and the number of interviewers that can work the site.

Because of the wide variations that can be expected to occur in the second and third factors, each exit point needs to be evaluated on its own to estimate the number of interviews with qualified respondents that could be expected during a three-hour period. Obviously, if the total volume of traffic and the ratio of qualified to non-qualified respondents is great enough so the field staff does not have to spend time waiting for another qualified party, the interviewing segment will result in a larger number of interviews. In some instances, it will be possible to forecast how productive the interviewing time will be; in other cases, it may be necessary to modify the sample design during the course of the survey to make the interviewing time and effort more productive.

## **Field Administration Requirements**

The number of interviewers required to man the interviewing station will depend upon the amount of traffic volume at the point. For high volume traffic exits, it will probably be necessary to have a "counter" to determine the ratio of qualified to non-qualified vehicles passing the point during the interviewing hours. (This ratio is used later in the tabulation process to determine the universe population projection base.)

For exits with low volume traffic, it is possible for the interviewers to keep a tally of the traffic flow, in addition to conducting the interviews with qualified respondents.

For high traffic exits, one counter and two interviewers are required, in addition to the flagman who

will direct traffic into the interviewing area. For low traffic volume exit points, two interviewers will be sufficient with one of them assuming the role of the counter in addition to the interviewing function.

An additional consideration on personnel, and materials requirements is the manpower that will be needed to direct traffic flow at the interviewing site. State highway departments will probably require that traffic flow will be under their jurisdiction and may require additional safeguards for controlling traffic at a particular site.

## **Field Materials**

Field materials consist of recording forms, questionnaires, and show cards. A complete set of example field materials is included at the end of this appendix; preparation of materials and interviewer training are discussed in Chapters VI and VII.

## **Vehicle and Respondent Selection**

The process of determining which vehicles and ultimately, the respondent that will be selected into the sample depends upon the traffic volume and the ratio of qualified to non-qualified vehicles. If either of these factors is such that enough time is available to complete each interview before the next qualified vehicle becomes available, all qualified vehicles encountered during the survey hours would be interviewed. In heavy traffic volume, the selection is based upon pulling the next vehicle out of line after the interview is completed. For example, if an average of one qualified vehicle passes the interviewing station every two minutes and the interview takes about six minutes to complete, about one out of every three vehicles would be stopped. On the other hand, if the average time elapsed between qualified vehicles is ten minutes, every vehicle passing the interviewing station would be interviewed.

For surveys that are statewide, the selection of vehicles from normal traffic flow is often simplified through license plate identification; if the survey area does not follow state boundaries, it is necessary to stop a random selection of vehicles—by stopping the next one passing the interviewing point to determine if the occupants qualify as living outside the survey area.

In each case, the respondent is the head of the travel party and the procedure for selecting the respondent is built into the questionnaire.

## Weighting of Highway Travel Studies

The number of non-resident travelers is determined by applying the ratio of non-resident to resident vehicles to the average daily traffic count.

When traffic volume is low enough so that all vehicles pass through the interviewing station, the ratio can be determined from the completed questionnaires. More likely, traffic volume will be too great to stop all vehicles, and it will be necessary to keep a separate count of all vehicles passing the survey station to determine this ratio, which requires an additional member to the survey team.

Ideally, the ratio between resident and non-resident vehicles can be determined from the manual count that is conducted at the interviewing station. However, because of safety factors, it may not be possible to conduct interviewing during high volume traffic periods. Additionally, since interviewing is limited to daylight hours, the ratio found during the interviewing hours may not be completely representative of total resident and non-resident traffic.

If it is believed that these conditions are such that the resident to non-resident ratio from conducting the tally at the time the interviewing is being done (or if

data on the ratio are not available from some other qualified source), it may be necessary to make independent manual counts of the selected highways throughout the survey period. The counts would be of a fixed time period (a half hour or an hour) and distributed between weekdays (Monday through Thursday) and weekend days (Friday through Sunday).

While the ratio of non-resident traffic will probably change from month to month, it is recommended that the averages of the monthly ratios be used to determine the estimated non-resident proportion.

After the ratio of non-resident vehicles on a highway-by-highway basis has been established, it can be applied to the average daily traffic counts to determine the number of non-resident travel parties. Ideally, monthly average daily traffic counts should be used but it may be necessary to work with quarterly figures.

The formula for determining the number of non-resident travel parties is the sum of average daily traffic divided by 2 (traffic counts are for both directions) times the number of days in the quarter times the ratio of non-resident vehicles for all highways.

The following shows an example for four highways based on quarterly average daily traffic counts:

Highway	Avg. Daily Traffic	Daily Traffic (Exiting)	Qrt. Avg. Total No. of Vehicles*	Ratio	Non-resident Parties
1	23,000	11,500	1,058,000	.42	444,400
2	14,000	7,000	644,000	.57	367,100
3	16,000	8,000	736,000	.48	353,300
4	10,000	5,000	460,000	.60	276,000
Total					1,440,800

\* Based on 92 days in the quarter

If the average daily traffic counts had been available on a monthly basis, the monthly figures divided by three would have been used. For example, if an exit point has average daily traffic of 5,700 in January, 5,400 in February, and 6,900 in March, the average for the quarter would be 6,000, that is,  $(5,700 + 5,400 + 6,900) \div 3$ .

Unlike other modes of transportation where the projection base is in terms of people, highway travel study projections are based on vehicles (parties), and

therefore, the average party size does not need to be figured in the calculation to determine the number of travel parties.

Due to the complexity of this tabulation, it is recommended that assistance be obtained from a consultant or person at an academic institution in determining the number of visitors to an area, their expenditures and characteristics. This person can also assist in advising on the level of detail that can be included in the analysis, based on the sample size.

TRAFFIC COUNTING SHEET

Exit Number:	Date:	Time Started: _____ AM
		_____ PM
Highway:		Time Stopped: _____ AM
		_____ PM

Washington, official, public, commercial:

Out-of-state (all others not above; include panels, pickups, and motorcycles):

TALLY	Out-of-state stopped:	Interviewed:
		_____
		Refused:
		_____
		Local (commuter), or student:
		_____
		Washington resident:
		_____



# QUESTIONNAIRE HIGHWAY SURVEY\*

EXIT NUMBER: \_\_\_\_\_ HIGHWAY: \_\_\_\_\_

- 1a. Are you a resident of the state of Washington? YES (TERMINATE INTERVIEW AND TALLY IN APPROPRIATE SPACE)  
NO (GO TO Q. 1b)

- 1b. Are you the head of your travel party? YES (GO TO Q. 2)  
NO (LOCATE; THEN GO TO Q. 2)

2. Thinking of this trip, and by this trip I mean since you *last entered* the state of Washington, what was the one *main* purpose of this trip to Washington?

ATTEND CONVENTION OR	SHOPPING .....	9
CONFERENCE..... 1	OTHER PERSONAL OR FAMILY	
BUSINESS OR TRADE..... 2	AFFAIRS..... 0	
PLEASURE OR VACATION..... 3	OTHER (Specify:) .....	X
OUTDOOR RECREATION (HUNTING,	DON'T KNOW, OR NO ANSWER .....	Y
FISHING, ETC.)..... 4	IF ANY OF THE BELOW, TERMINATE	
ENTERTAINMENT (THEATER,	AND TALLY HERE:.....	
SPECTATOR SPORTS, ETC.)..... 5	STUDENT ATTENDING SCHOOL IN	
SIGHTSEEING..... 6	WASHINGTON	
ATTRACTIONS (Specify:)..... 7	COMMUTES TO WORK IN STATE, BUT	
VISIT FRIENDS OR RELATIVES..... 8	LIVES OUTSIDE STATE	

3. What are some of the other purposes of this trip in Washington?

ATTEND CONVENTION OR	SIGHTSEEING .....	6
CONFERENCE..... 1	ATTRACTIONS (Specify:).....	7
BUSINESS OR TRADE..... 2	VISIT FRIENDS OR RELATIVES.....	8
PLEASURE OR VACATION..... 3	SHOPPING .....	9
OUTDOOR RECREATION (HUNTING,	OTHER PERSONAL OR FAMILY	
FISHING, ETC.)..... 4	AFFAIRS..... 0	
ENTERTAINMENT (THEATER,	OTHER (Specify:) .....	X
SPECTATOR SPORTS, ETC.)..... 5	DON'T KNOW, OR NO ANSWER .....	Y
	NO OTHER PURPOSES.....	N

4. In what state or country do you presently reside? (SPECIFY STATE OR COUNTRY:) \_\_\_\_\_

5. What types of transportation did you use traveling in Washington on this trip?

PRIVATELY OWNED CAR..... 1	TAXI, LIMOUSINE, CITY BUS.....	7
RENTAL CAR..... 2	COMMERCIAL BUS LINE.....	8
CAMPER OR RECREATIONAL	CHARTERED BUS.....	9
VEHICLE..... 3	BOAT.....	0
COMMERCIAL AIRPLANE..... 4	OTHER (Specify:).....	X
PRIVATE AIRPLANE..... 5	DON'T KNOW, OR NO ANSWER.....	Y
RAILROAD..... 6		

6. What cities or places in the state of Washington did you visit or go through on this trip? (IF KING COUNTY NOT MENTIONED, PROBE.)	SEATTLE	KING COUNTY	OUTSIDE KING COUNTY
	YES ..... 1		
	NO ..... 2		
7a. (IF VISITED SEATTLE, ASK:) Thinking about your visit in Seattle, how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ? (IF UNDECIDED) Well, just your best guess.			
Food and refreshments.....	\$ .....	\$ .....	\$ .....
Recreation and entertainment .....	\$ .....	\$ .....	\$ .....
Lodging and accommodations.....	\$ .....	\$ .....	\$ .....
Airline, bus, train, boat, rental car transportation fares.....	\$ .....	\$ .....	\$ .....
Gasoline, oil, tires, repairs.....	\$ .....	\$ .....	\$ .....
Other retail purchases or services.....	\$ .....	\$ .....	\$ .....
Anything else? .....	\$ .....	\$ .....	\$ .....
INDEFINITE: Well, what is your best guess for the total amount spent? .....	\$ .....	\$ .....	\$ .....
b. IF VISITED KING CO., ASK:) Thinking about your visit in (PLACES LISTED IN KING COUNTY) how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ?			
c. (IF VISITED OTHER AREAS IN WASHINGTON, ASK:) Thinking about your visit in (OTHER PLACES IN WASHINGTON), how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ?			

8. ASK ONLY FOR AREAS VISITED IN Q. 6:	NUMBER OF NIGHTS	NONE	DON'T KNOW, NO ANSWER
On this trip, how many nights did you spend in . . .			
(the city of Seattle)?.....SEATTLE	.....	0	Y
(places listed in King County)? ....KING CO.	.....	0	Y
(other places in Washington)? .....WASHINGTON	.....	0	Y
(IF NO NIGHTS SPENT IN ANY AREA, GO TO Q. 10a)			

9. In what types of lodgings or accommodations did you stay while in Washington?

HOTEL, MOTEL, TOURIST COURT .....	1	TENT, CAMPGROUND.....	6
RESORT, DUDE RANCH .....	2	CAR (NOT IN CAMPGROUND) .....	7
TOURIST HOME.....	3	HOME OF FRIENDS OR RELATIVES.....	8
SEASONAL HOME, CABIN.....	4	OTHER (Specify):.....	9
TRAILER, CAMPER, RECREATION		DON'T KNOW, OR NO ANSWER.....	0
VEHICLE .....	5		

10a. How many persons altogether, including yourself and babies, are traveling in your party on this trip?

1 (GO TO Q. 11)..... 1  
2 3 4 5 6 7 8 9  
10 OR MORE..... 0  
DON'T KNOW, OR NO ANSWER.....X

b. And, how many persons 18 years or older, including yourself, are traveling in your party on this trip?

NUMBER:.....  
DON'T KNOW, OR NO ANSWER.....Y

11. (SHOW AGE CARD) Please show me into which age group you fall. (IF REFUSED, ESTIMATE AND CIRCLE CODE.)

UNDER 13.....	1	35-44.....	5
13-17.....	2	45-54.....	6
18-24.....	3	55-64.....	7
25-34.....	4	65 OR OLDER .....	8

12. (SHOW EDUCATION CARD) Please point out the last grade of school you completed.

GRADUATE STUDY .....	1	SOME HIGH SCHOOL.....	5
COLLEGE GRADUATE.....	2	8TH GRADE OR LESS .....	6
SOME COLLEGE .....	3	NO SCHOOLING.....	7
HIGH SCHOOL GRADUATE .....	4	NO ANSWER.....	8

13. Who is the head of your household?

RESPONDENT..... 1  
OTHER HOUSEHOLD MEMBER ..... 2 |

14. What is the occupation of the head of your household?  
IS RETIRED, CHECK HERE ☐ AND ASK FOR FORMER OCCUPATION.

OCCUPATION:

15. (SHOW INCOME CARD) Will you point out which of these groups best describes the total annual income of your household before taxes?

LESS THAN \$5,000	1	\$25,000-\$29,999 .....	6
\$5,000-\$9,999 .....	2	\$30,000-\$34,999 .....	7
\$10,000-\$14,999 .....	3	\$35,000 OR	
\$15,000-\$19,999 .....	4	MORE .....	8
\$20,000-\$24,999 .....	5	DON'T KNOW, OR	
		NO ANSWER .....	9
		REFUSED .....	0

16. May I please have your name in case the research company wants to check my work? NAME:



- 
17. And your home address is: ADDRESS: CITY: ZIP CODE:
- 
18. And your home telephone number: AREA CODE: PHONE #:  
REFUSED .....X NO PHONE.....Y
- 

Thank you very much. Have a pleasant trip!

---

AFTER COMPLETING INTERVIEW, BUT BEFORE GOING TO NEXT VEHICLE, FILL OUT BELOW:

19. SEX OF RESPONDENT: MALE..... 1 FEMALE..... 2
20. DATE: \_\_\_\_\_ AM
21. TIME ENDED: \_\_\_\_\_ PM
22. INTERVIEWER NUMBER: \_\_\_\_\_
- 

\*The actual size of the questionnaire should be one page with the dimensions  $8\frac{1}{2}'' \times 14''$  Questions 1 through 8 should be put on the front page and the remaining questions should be put on the back side of the page.

# APPENDIX D

## INSTRUCTIONS FOR BUS TRAVEL SURVEY

### Washington Travel Study

#### WHEN TO INTERVIEW

Each Trip Assignment Sheet specifies the date and time that you are to be at the bus depot. The assignment sheet also indicates the destination (trip) that will be worked.

#### WHERE TO INTERVIEW

All interviewing will be done aboard the bus as it is traveling to its destination. After each person, or travel party, on the bus has been contacted, the screening device built into the questionnaire will be used to determine qualified respondents.

#### WHOM TO INTERVIEW

Everyone who is aboard the bus, and all those who board it at the same depot you do, will be contacted. Only those who qualify will be interviewed.

In order to qualify, the respondent must be:

1. A non-resident of Washington State, and
2. The head of the travel party

Persons who do not qualify include:

1. Washington State residents.
2. Pass-through passengers (those who boarded the bus outside the state and have not gotten off it at any stop within the state).
3. Students from out-of-state who are attending school in Washington but consider their place of residence their home state.
4. Those who live outside the state but commute by bus to a place of employment within Washington. (The business traveler who is in Washington frequently, but does not commute daily, is not included in this definition.)

5. Those who are not the head of the travel party. (The head of the travel party is the person who is responsible for the dollar expenditures during the trip.)

Beginning at the front of the bus, contact each person who is aboard to determine if he qualifies (by asking Questions 0 through 2). If the first person does not qualify, go on to the next person. If the person, or group of people, sitting next to the one you contact are obviously part of his travel party, it is not necessary to contact him/them.

When you have found the first qualified respondent, continue with the interview through Question 6. At this point, the respondent will continue to fill out the questionnaire while you continue to make contacts with other passengers in the bus.

After you have contacted everyone, return to those who qualify to pick up the completed questionnaires. A certain amount of quick checking over the questionnaire to make sure it is filled out properly will be required. More detailed instructions are included in the QUESTIONNAIRE section later.

Since you may begin making your contacts before everyone has boarded the bus, it will be necessary to keep your eye open to see that you contact late boarders if they occupy a seat near the front.

#### QUESTIONNAIRE

The following pages explain how the questions are to be handled. Do not allow the respondent to see the questionnaire until the point in the interview (Question 7) where he begins to complete the rest of the questionnaire.

*Question 0*—Ask this question of each person (or travel party) that you contact, and record the number of persons in the travel party on one of the lines to the right.

*Question 1a*—Washington residents are those people who live within the state and consider Washington their legal residence. Students attending a college or university within the state *are* considered residents. Note that we have also included this as a second check in Question 2, which will be discussed later.

*It is very important that the results of this question be recorded accurately.* For each person you contact be-

fore finding a qualified respondent, place a tally mark (///) in the space provided.

*Question 1b*—The *head* of the travel party is the person who is responsible for the trip expenditure. This could be either the male or female in the party.

If there is only one person in the party, he is the head. Additionally, there are no age limitations; for example, a 12-year-old traveling by himself is the head of the travel party.

If the person you contact is not the head of the party, ask who is, and locate him. If it is impossible to interview him, and this situation should happen very seldom in bus travel, put a tally mark in the space available, and go on to another person.

*Question 2*—Note that the question asks for the main purpose of this trip to Washington. If the respondent gives more than one purpose, probe to determine the *main* reason.

In the lower right-hand section of responses, you will notice that we have included three classes of respondents which do not qualify which were described in detail earlier. Should the respondent fall into one of these classes, tally this in the appropriate space and attempt another contact.

Note that you can continue using the same questionnaire.

Again, it is very important that the number of persons screened out from being interviewed be tallied accurately. The total of tally marks from 1a and 1b should always be one less than the number of parties recorded in Question 0.

*Question 3*—This question asks for other purposes of the trip to Washington; multiple answers are possible.

If the trip was taken for only one purpose, be sure to circle the code for "NO OTHER PURPOSES"—Code N. Do not confuse this alternative with the NO ANSWER alternative that appears in the question.

*Question 4*—Be sure to write legibly and do not abbreviate. The letter "I" could stand for Idaho, Illinois, Iowa, or Indiana.

*Question 5*—There are some subtle differences between the pre-listed alternatives (such as COM-

MERCIAL BUS LINE and CHARTERED BUS), so be sure to study them carefully so you will be able to distinguish between them when the respondent gives his answer.

*Question 6*—Note that the question includes "*visit or go through*" and that a separate space to write in the response has been included for each of the three geographical areas.

If "Seattle" is mentioned, you simply have to circle Code 1 for the response. If Seattle is not mentioned, be sure to circle Code 2 so we will know that the question has not been omitted.

You are being provided with a list of the cities, places, and attractions in King County to help identify those which should be recorded in the space under "King County." Places mentioned that are not in King County (or Seattle) should be recorded in the space under "Outside King County."

If the respondent does not mention any places in King County, probe to find out if he actually has visited any because a non-resident may not be familiar with those that are actually in King County and those that are not.

At this point in the interview, hand a pencil to the respondent and ask him to complete the questionnaire.

Explain briefly to him that he should fill in the answers for Questions 7 and 8 for each area that you have marked in Question 6.

For example, if the respondent had visited Seattle and some places in King County, he would fill in the dollar amounts spent and the number of nights in each of these areas. The column for OUTSIDE KING COUNTY should be left blank.

The remaining questions (9 through 17) and the name, address, and phone number should be self-explanatory to the respondent.

Tell the respondent that you will be back to pick up the questionnaire, and continue the process of contacting other passengers to determine if they qualify.

## CONCLUDING THE INTERVIEW

After you have contacted everyone on the bus, return to those who are filling out the questionnaires to pick



them up. When you pick up the questionnaire, scan through it quickly to make sure the respondent has completed it properly. If there is incomplete information, attempt to get the information from him.

The following explanations are included for your benefit in the event that the respondent has a problem with any of the questions.

**Question 7**—This is a very important question and it is necessary to get as much information from the respondent as possible. If the respondent is unable to recall the amount spent for each classification of expenditure, ask: “Well, what is your best guess for the total amount spent?” and record the total estimate in the space under the last line.

**Question 9**—Multiple answers are allowed, so more than one code may be circled. Code “0”—NONE—should be circled if no nights were spent in Question 8.

**Question 10**—This question refers to the total number of persons in the travel party on this trip.

**Question 11**—This question asks about the number 18 or older in the travel party.

**Question 12**—This question allows people to tell only their approximate age; if anyone is reluctant, show them that by picking a group of ages no one is asked to reveal their exact age. If he refuses his age, you estimate it and circle the code later (but be sure the respondent does not notice you are doing this—some people don’t like to have their ages even guessed at!) **DO NOT OMIT RESPONDENT’S AGE FROM ANY QUESTIONNAIRE.**

**Question 13**—This is the *last* grade of school completed by the respondent. There should be only one answer.

**Question 14**—The head of household is the person who makes the most money. If you are interviewing someone in a household where two or more single adults live, the head of household is the respondent, unless the respondent tells you otherwise. If both a husband and a wife are retired and drawing pensions and social security, the husband is considered the head of household.

**Question 15**—For this question we want to know the particular or specific job the respondent does—“sell tickets for the airline,” “supervises workers for a

home builder,” “operates a paper loading machine,” “writes and edits a company newspaper,” and the like. If the head of household is retired, we want to find out what his particular job was—what he did do.

**GET SPECIFIC ANSWERS HERE.** Here are some examples of answers which are *not* specific enough:

Operates a machine (what kind of machine?)

Is a salesman (what does he sell?)

Is an engineer (what type of engineer?)

**Question 16**—Note that the income groupings are broad enough that no one will be revealing his actual income.

After you have completed your interviewing, record on each questionnaire the Trip ID#, Destination, Bus Line, Date, and Interviewer Number in the box labeled “FOR OFFICE USE ONLY.” This information can be found on your TRIP ASSIGNMENT SHEET.

At this time, also count the total number of passengers on the bus and record it on the TRIP ASSIGNMENT SHEET.

Keep the TRIP ASSIGNMENT SHEET and the completed questionnaires for this trip together.

## **SURVEY METHODOLOGY FOR BUS TRAVEL**

The universe, or population to be studied, is total *non-resident* bus travelers exiting the area. This definition excludes permanent residents of the area (including students) and persons who may be commuting to and from work on a regular basis by commercial bus carrier.

### **Sample Design Methodology**

The sample is of a probability design, using several stages of stratification, and the selection of a single respondent from each travel party drawn into the sample.

If the survey area is small and served by one, or only a few terminals, consideration should be given to interviewing passengers as they board the bus. When the survey area covers a wide geographic area, and

there are a large number of places where a person can board a bus, it will be more practical to design the sample around the last stop in the area, rather than trying to cover all bus terminals. Covering all terminals requires that respondents be screened to establish that they intend to leave the area and, therefore, will not spend additional time and money in the survey area. Boarding the bus at the last stop before leaving the area eliminates this possibility. Since a bus may leave the survey area on any highway, including the less frequently traveled ones, it is necessary to work with all carriers operating in the survey area to determine schedules for all exit routes.

If the departures from a specific terminal are infrequent, or the average passenger load per trip is small, total traffic may not justify including departures by that route. For example, if the trip traditionally has only a few passengers aboard when it leaves the survey area because it is a connecting route running primarily for the purpose of getting the equipment from one place to another, attempting to conduct interviews on a regular basis may not be economically feasible.

Using a random selection of trips, explained in detail later, will produce the proper number of trips for each exit from the survey area.

Once a sample of trips has been selected, a complete census is taken of all passengers on the trip, regardless of the passenger load. A complete census is possible because interviewing is conducted enroute from the last stop in the survey area to the first stop outside the area, allowing sufficient time to complete the task. This maximizes interviewer productivity and eliminates some of the weighting that would be necessary if only a sample of respondents had been selected from each trip.

## **Determining the Number of Trips to be Sampled**

Experience indicates that an average of about one out of four total passengers will qualify as a non-resident travel party head, so a passenger load of 20 to 25 people can be expected to produce about five completed interviews.

If a minimum sample size is desired for the survey, it will be necessary to work with bus line officials to determine the average passenger loads that are experi-

enced at the points of interviewing to establish the number of trips that need to be sampled.

More commonly, the sample size (and therefore, the number of trips that can be sampled) will be determined by a fixed budget. Although the sample design will generally call for some kind of clustering of trips from various exit points to maximize efficiency, there are a number of costs that need to be taken into consideration.

Factors which must be considered in determining the cost per trip, or cost per day, for bus travel studies include:

1. The amount of layover time needed by the interviewer before a return trip is available since field procedures call for the interviewer to board the bus at the last stop before exiting the area, conduct the interview enroute, and then return by the earliest return trip.
2. Availability of interviewers living in, or near, the major departure points. Obviously, it will be much more efficient to recruit a staff of interviewers who do not have to travel long distances to report for work.
3. Transportation fares that may be required by the carrier.

Following a complete evaluation of schedules, travel distances, and other miscellaneous costs, the average cost per trip can be computed. This average can then be used to determine the approximate number of bus trips that can be surveyed within the available budget.

## **Selection of Sample Trips**

The basic sample frame for selecting trips to be surveyed is a complete listing of the schedules for all commercial bus lines departing the survey area. Merging the schedules of the carriers, it is possible to construct a master list of all trips leaving the survey area based upon the last stop before exiting the area.

From this complete listing, it is then possible to determine the total number of trips leaving the survey area on a daily, monthly, or yearly basis. This provides the basis for defining the sample frame (all trips leaving the area from which individual trips are selected).



All trips, regardless of their passenger load, will have an equal chance of being selected, and the distribution by exiting points will be proportionate to the number of trips leaving the survey area from that point.

The distribution will have to be based on the current schedules at the time the basic sample plan is designed. Although the schedules will not change a great deal during the year, a few routes may be added or dropped; therefore, it is necessary to review the schedules before each sampling period is begun to determine if they are still accurate.

The number of trips sampled from each exit point is determined by the distribution of the number of trips flowing through the point during a specific time period. For example, the following illustration is based on six exit points in the survey area and a sample plan to survey 200 trips throughout the year.

City	Weekly Departures	Percent of Total Departures	Number of Departures Surveyed
A	252	25.7%	52
B	133	13.6	27
C	105	10.7	21
D	28	2.9	6
E	455	46.4	93
F	7	.7	1
Total	980	100.0%	200

From the table above, it is obvious that Cities D and F cannot be sampled every month because neither one has a proportionate share of the total number of trips to warrant one sampled departure per month.

Two alternatives are available:

1. Some months will not be sampled; cluster the months into quarters and randomly select one or more months from each quarter.
2. Disregard these exit points from the sample frame since the volume of traffic through them may not justify the expense of data collection.

Because Cities D and F each account for less than five percent of total trips exiting the area, and because the cost of setting up and administering the field work would be substantial, these cities should be excluded from the sample.

The new sample distribution would be as follows:

City	Weekly Departures	Percent of Total Departures	Number of Departures Surveyed
A	252	26.7%	54
B	133	14.1	28
C	105	11.1	22
E	455	48.1	96
Total	945	100.0%	200

In order to maximize interviewer productivity, it is preferable that the sample be designed to include at least two trips on each day that an interviewer works.

Since the number of trips sampled in any given month is not large enough to have interviewing conducted on all seven days of the week (the largest is eight trips per month for City E), the sample needs to be projected throughout the entire year to give as equal distribution as possible on a quarterly basis and on a daily basis in order to avoid any bias of weekday or week-end traffic patterns.

If the sample size had been large enough, or the number of exit points small enough, so that a minimum of 14 trips would be surveyed each month (two trips for each day of the week), it would have been possible to select a week at random for each month, and treat each exit point separately.

### Field Staff Requirements

The number of interviewers required to work each trip will depend upon the travel distance (time) between the last stop in the area and the first stop outside the area.

Because the questionnaire is partially self-administered, the actual interviewing time for each respondent is slightly less than it would be if the interviewer had to go through the entire questionnaire. However, it is recommended that the interviewer administer those questions that may cause some respondent confusion, such as the question concerning the sub-areas visited within the total survey area.

If the travel time between the last stop in the area and the first stop outside the area is less than 20 minutes, two interviewers will be required for each trip. If the travel time is greater, one interviewer could be expected to handle the trip.



Preparation of materials, including interviewer instructions, and interviewer training are discussed in Chapters VI and VII. Examples of field materials appear at the end of this appendix.

## **Weighting the Bus Travel Study**

Since a complete census is taken for each bus trip included in the sample, the ratio of qualified to non-qualified travel parties and the average party size can be determined from the records for the trip. If for some reason it is not possible to complete a census of the trip, the distribution found from completed questionnaires can be applied to the total number of passengers as recorded by the interviewer on the recording form for that trip.

Because a complete census is taken of each trip, trips are selected with equal probability regardless of

size, the need for weighting to adjust for passenger load on a trip-by-trip basis is eliminated. However, if the sample size is large enough for stability on a monthly, or quarterly basis, it may be possible to project the results against total passengers during a given month or quarter. Using the screening records from each trip included in the survey, the ratio of qualified to non-qualified passengers can be established and projected against total passenger figures provided by the carriers. The number of travel "parties" can be determined by dividing the number of qualified passengers by the average party size found in the survey.

Due to the complexity of this tabulation, it is recommended that assistance be obtained from a consultant or person at an academic institution when determining visitor volumes, expenditures and characteristics. This person can also assist in advising on the level of detail that can be included in the analysis, based on the sample size.

**BUS ASSIGNMENT SHEET**

Job: \_\_\_\_\_

Interviewer Number: \_\_\_\_\_

ID#: \_\_\_\_\_

BUS LINE \_\_\_\_\_

TRIP NUMBER (DESTINATION:) \_\_\_\_\_

DAY AND DATE: \_\_\_\_\_

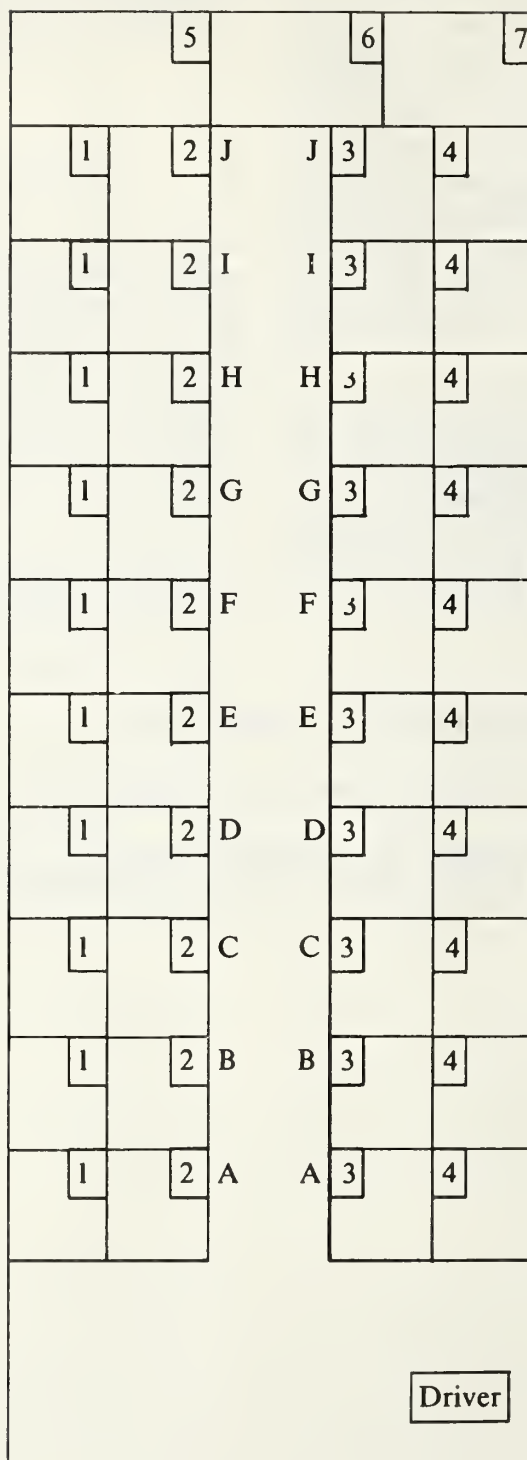
BOARD BUS IN \_\_\_\_\_, WASHINGTON AT \_\_\_\_\_ a.m.  
p.m.

TOTAL NUMBER OF PASSENGERS AT STATE LINE \_\_\_\_\_

NUMBER OR COMPLETED INTERVIEWS FOR THIS TRIP: \_\_\_\_\_

ATTACH THIS SHEET TO QUESTIONNAIRES FOR THIS TRIP  
BEFORE RETURNING IT TO YOUR SUPERVISOR.

## BUS SEATING DIAGRAM



### SYMBOLS:

- ☒ To be interviewed (Qualified respondent)
- ☐ Not to be interviewed (Not qualified, of member of same travel party as qualified respondent)
- ☐ Vacant Seat



## QUESTIONNAIRE BUS SURVEY\*

0. How many persons altogether, including yourself and babies, are traveling in your party on this trip? (WRITE IN NUMBER IN TRAVEL PARTY:) \_\_\_\_\_

1a. Are you a resident of the state of Washington? YES (TERMINATE INTERVIEW AND TALLY: ) \_\_\_\_\_  
NO (GO TO Q. 1b) \_\_\_\_\_

b. Are you the head of your travel party? YES (GO TO Q. 2)  
NO (ATTEMPT TO LOCATE: TERMINATE INTERVIEW IF YOU CANNOT, AND TALLY: ) \_\_\_\_\_

2. Thinking of this trip, and by this trip I mean since you *last entered* the state of Washington, what was the one *main* purpose of this trip to Washington?

ATTEND CONVENTION OR CONFERENCE.....	1	SHOPPING .....	9
BUSINESS OR TRADE.....	2	OTHER PERSONAL OR FAMILY AFFAIRS.....	0
PLEASURE OR VACATION.....	3	OTHER (Specify: ).....	X
OUTDOOR RECREATION (HUNTING, FISHING, ETC.).....	4	DON'T KNOW, OR NO ANSWER.....	Y
ENTERTAINMENT (THEATER, SPECTATOR SPORTS, ETC.).....	5	IF ANY OF THE BELOW, TERMINATE AND TALLY HERE: .....	
SIGHTSEEING.....	6	PASSING THROUGH STATE	
ATTRACTIONS (Specify: ).....	7	STUDENT ATTENDING SCHOOL IN WASHINGTON	
VISIT FRIENDS OR RELATIVES .....	8	COMMUTES TO WORK IN STATE, BUT LIVES OUTSIDE STATE	

3. What are some of the other purposes of this trip in Washington?

ATTEND CONVENTION OR CONFERENCE.....	1	SIGHTSEEING .....	6
BUSINESS OR TRADE.....	2	ATTRACTIONS (Specify: ).....	7
PLEASURE OR VACATION.....	3	VISIT FRIENDS OR RELATIVES.....	8
OUTDOOR RECREATION (HUNTING, FISHING, ETC.).....	4	SHOPPING .....	9
ENTERTAINMENT (THEATER, SPECTATOR SPORTS, ETC.).....	5	OTHER PERSONAL OR FAMILY AFFAIRS.....	0
		OTHER (Specify: ).....	X
		DON'T KNOW, OR NO ANSWER.....	Y
		NO OTHER PURPOSES .....	N

4. In what state or country do you presently reside? (SPECIFY STATE OR COUNTRY: ) \_\_\_\_\_

5. What types of transportation did you use traveling in Washington on this trip?

PRIVATELY OWNED CAR .....	1	TAXI, LIMOUSINE, CITY BUS .....	7
RENTAL CAR .....	2	COMMERCIAL BUS LINE .....	8
CAMPER OR RECREATIONAL VEHICLE.....	3	CHARTERED BUS .....	9
COMMERCIAL AIRLINE.....	4	BOAT .....	0
PRIVATE AIRPLANE.....	5	OTHER (Specify: ).....	X
RAILROAD .....	6	DON'T KNOW, OR NO ANSWER.....	Y

6. What cities or places in the state of Washington did you visit or go through on this trip?

SEATTLE

KING  
COUNTY

OUTSIDE  
KING  
COUNTY

YES ..... 1  
NO ..... 2

7. For each area visited, please write in how much you and all others in your travel party spent, including credit card purchases, for each of the following items on this trip.

Food and refreshments.....	\$ _____	\$ _____	\$ _____
Recreation and entertainment .....	\$ _____	\$ _____	\$ _____
Lodging and accommodations.....	\$ _____	\$ _____	\$ _____
Airline, bus, train, boat, rental car transportation fares .....	\$ _____	\$ _____	\$ _____
Gasoline, oil, tires, repairs.....	\$ _____	\$ _____	\$ _____
Other retail purchases or services.....	\$ _____	\$ _____	\$ _____
Anything else? .....	\$ _____	\$ _____	\$ _____

8. Please write in the number of nights spent in each area on this trip.

PLEASE CIRCLE THE APPROPRIATE NUMBER, OR WRITE IN THE ANSWER, FOR THE REMAINING QUESTIONS.

9. In what types of lodgings or accommodations did you stay while in Washington?

HOTEL, MOTEL, TOURIST COURT..... 1	TENT, CAMPGROUND..... 6
RESORT, DUDE RANCH..... 2	CAR (NOT IN CAMPGROUND)..... 7
TOURIST HOME..... 3	HOME OF FRIENDS OR RELATIVES .... 8
SEASONAL HOME, CABIN..... 4	OTHER (Specify:) ..... 9
TRAILER, CAMPER, RECREATION VEHICLE..... 5	NONE..... 0
	DON'T KNOW, OR NO ANSWER ..... 4

10. How many persons altogether, including yourself and babies, are traveling in your party on this trip?

NUMBER: \_\_\_\_\_

11. How many persons 18 years or older, including yourself, are traveling in your party on this trip?

NUMBER: \_\_\_\_\_

12. Please circle the code for your age group.

UNDER 13.....	1	35-44.....	5
13-17.....	2	45-54.....	6
18-24.....	3	55-64.....	7
25-34.....	4	65 OR OLDER.....	8

13. Please circle the code for the last grade of school you completed.

GRADUATE STUDY.....	1	SOME HIGH SCHOOL.....	5
COLLEGE GRADUATE.....	2	8TH GRADE OR LESS.....	6
SOME COLLEGE.....	3	NO SCHOOLING.....	7
HIGH SCHOOL GRADUATE.....	4		

14. Who is the head of your household?

YOURSELF.....	1
ANOTHER HOUSEHOLD MEMBER.....	2

15. What is the occupation of the head of your household?  
 IF RETIRED, CHECK HERE ☐ AND  
 WRITE FORMER OCCUPATION.

OCCUPATION: \_\_\_\_\_

16. Which of these groups best describes the total annual income of your household before taxes?

LESS THAN \$5,000..	1	\$20,000-\$24,999.....	5
\$5,000-\$9,999.....	2	\$25,000-\$29,999.....	6
\$10,000-\$14,999.....	3	\$30,000-\$34,999.....	7
\$15,000-\$19,999.....	4	\$35,000 OR MORE.....	8

17. Questionnaire completed by:

MALE: .....	1
FEMALE.....	2

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY STATE ZIP CODE

HOME PHONE NUMBER \_\_\_\_\_

**FOR OFFICE USE ONLY:**

Trip ID#: \_\_\_\_\_ Destination: \_\_\_\_\_ Bus Line: \_\_\_\_\_

Date: \_\_\_\_\_ Interviewer Number: \_\_\_\_\_

\* The actual size of the questionnaire should be one page with the dimensions 8½" x 14". Questions 1 through 8 should be put on the front page and the remaining questions should be put on the back side of the page.



# APPENDIX E

## INSTRUCTIONS FOR TRAIN TRAVEL SURVEY

### Washington Travel Study

#### WHEN TO INTERVIEW

Each Trip Assignment Sheet specifies the date and time that you are to be at the train depot. The assignment sheet also indicates the destination (trip) that will be worked.

#### WHERE TO INTERVIEW

All interviewing will be done aboard the train as it is traveling to its destination. After each person, or travel party, on the selected car has been contacted, the screening device built into the questionnaire will be used to determine qualified respondents.

#### WHOM TO INTERVIEW

Everyone who is aboard the car, and all those who board it at the same depot you do, will be contacted. Only those who qualify will be interviewed.

In order to qualify, the respondent must be:

1. A non-resident of Washington State, and
2. The head of the travel party

Persons who do not qualify include:

1. Washington State residents.
2. Pass-through passengers (those who boarded the train outside the state and have not gotten off it at any stop within the state).
3. Students from out-of-state who are attending school in Washington but consider their place of residence their home state.
4. Those who live outside the state but commute by train to a place of employment within Washington. (The business traveler who is in Washington frequently, but does not commute daily, is not included in this definition.)

5. Those who are not the head of the travel party. (The head of the travel party is the person who is responsible for the dollar expenditures during the trip.)

Beginning at the front of the car, contact each person who is aboard to determine if he qualifies (by asking Questions 0 through 2). If the first person does not qualify, go on to the next person. If the person, or group of people, sitting next to the one you contact are obviously part of his travel party, it is not necessary to contact him/them.

When you have found the first qualified respondent, continue with the interview through Question 6. At this point, the respondent will continue to fill out the questionnaire while you continue to make contacts with other passengers in the car.

After you have contacted everyone, return to those who qualify to pick up the completed questionnaires. A certain amount of quick checking over the questionnaire to make sure it is filled out properly will be required. More detailed instructions are included in the QUESTIONNAIRE section later.

Since you may begin making your contacts before everyone has boarded the train, it will be necessary to keep your eye open to see that you contact late boarders if they occupy a seat near the front.

#### QUESTIONNAIRE

The following pages explain how the questions are to be handled. Do not allow the respondent to see the questionnaire until the point in the interview (Question 7) where he begins to complete the rest of the questionnaire.

*Question 0*—Ask this question of each person (or travel party) that you contact, and record the number of persons in the travel party on one of the lines to the right.

*Question 1a*—Washington residents are those people who live within the state and consider Washington their legal residence. Students attending a college or university within the state *are* considered residents. Note that we have also included this as a second check in Question 2, which will be discussed later.

*It is very important that the results of this question be recorded accurately.* For each person you contact be-

fore finding a qualified respondent, place a tally mark (////) in the space provided.

*Question 1b*—The *head* of the travel party is the person who is responsible for the trip expenditures. This could be either the male or female in the party.

If there is only one person in the party, he is the head. Additionally, there are no age limitations; for example, a 12-year-old traveling by himself is the head of the travel party.

If the person you contact is not the head of the party, ask who is, and attempt to locate him, if he is in the same car. If he is not in the same car at that time, record the name on the second page of the questionnaire, and set it aside. You will attempt to locate him later in another car, or when he returns to the car before it reaches its destination.

Use another questionnaire and go on to another person.

*Question 2*—Note that the question asks for the main purpose of this trip to Washington. If the respondent gives more than one purpose, probe to determine the *main* reason.

In the lower right-hand section of responses, you will notice that we have included three classes of respondents which do not qualify which were described in detail earlier. Should the respondent fall into one of these classes, tally this in the appropriate space and attempt another contact.

Note that you can continue using the same questionnaire.

Again, it is very important that the number of persons screened out from being interviewed be tallied accurately. The total of tally marks from 1a and 1b should always be one less than the number of parties recorded in Question 0.

*Question 3*—This question asks for other purposes of the trip to Washington; multiple answers are possible.

If the trip was taken for only one purpose, be sure to circle the code for “NO OTHER PURPOSES”—Code N. Do not confuse this alternative with the NO ANSWER alternative that appears in the question.

*Question 4*—Be sure to write legibly and do not ab-

breviate. The letter “I” could stand for Idaho, Illinois, Iowa, or Indiana.

*Question 5*—There are some subtle differences between the pre-listed alternatives (such as COMMERCIAL BUS LINE and CHARTERED BUS), so be sure to study them carefully so you will be able to distinguish between them when the respondent gives his answer.

*Question 6*—Note that the question includes “*visit or go through*” and that a separate space to write in the response has been included for each of the three geographical areas.

If “Seattle” is mentioned, you simply have to circle Code 1 for the response. If Seattle is not mentioned, be sure to circle Code 2 so we will know that the question has not been omitted.

You are being provided with a list of the cities, places, and attractions in King County to help identify those which should be recorded in the space under “King County.” Places mentioned that are not in King County (or Seattle) should be recorded in the space under “Outside King County.”

If the respondent does not mention any places in King County, probe to find out if he actually has visited any because a non-resident may not be familiar with those that are actually in King County and those that are not.

At this point in the interview, hand a pencil to the respondent and ask him to complete the questionnaire.

Explain briefly to him that he should fill in the answers for Questions 7 and 8 for each area that you have marked in Question 6.

For example, if the respondent had visited Seattle and some places in King County, he would fill in the dollar amounts spent and the number of nights in each of these areas. The column for OUTSIDE KING COUNTY should be left blank.

The remaining questions (9 through 17) and the name, address, and phone number should be self-explanatory to the respondent.

Tell the respondent that you will be back to pick up the questionnaire, and continue the process of contacting other passengers to determine if they qualify.



## CONCLUDING THE INTERVIEW

After you have contacted everyone in the car, return to those who are filling out the questionnaires to pick them up. When you pick up the questionnaire, scan through it quickly to make sure the respondent has completed it properly. If there is incomplete information, attempt to get the information from him.

The following explanations are included for your benefit in the event that the respondent has a problem with any of the questions.

*Question 7*—This is a very important question and it is necessary to get as much information from the respondent as possible. If the respondent is unable to recall the amount spent for each classification of expenditure, ask: "Well, what is your best guess for the total amount spent?" and record the total estimate in the space under the last line.

*Question 9*—Multiple answers are allowed, so more than one code may be circled. Code "0"—NONE—should be circled if no nights were spent in Question 8.

*Question 10*—This question refers to the total number of persons in the travel party on this trip.

*Question 11*—This question asks about the number 18 or older in the travel party.

*Question 12*—This question allows people to tell only their approximate age; if anyone is reluctant, show them that by picking a group of ages no one is asked to reveal their exact age. If he refuses his age, you estimate it and circle the code later (but be sure the respondent does not notice you are doing this—some people don't like to have their ages even guessed at!) **DO NOT OMIT RESPONDENT'S AGE FROM ANY QUESTIONNAIRE.**

*Question 13*—This is the *last* grade of school completed by the respondent. There should be only one answer.

*Question 14*—The head of household is the person who makes the most money. If you are interviewing

someone in a household where two or more single adults live, the head of household is the respondent, unless the respondent tells you otherwise. If both a husband and a wife are retired and drawing pensions and social security, the husband is considered the head of household.

*Question 15*—For this question we want to know the particular or specific job the respondent does—"sell tickets for the airline," "supervises workers for a home builder," "operates a paper loading machine," "writes and edits a company newspaper," and the like. If the head of household is retired, we want to find out what his particular job was—what he did do.

**GET SPECIFIC ANSWERS HERE.** Here are some examples of answers which are *not* specific enough:

Operates a machine (what kind of machine?)

Is a salesman (what does he sell?)

Is an engineer (what type of engineer?)

*Question 16*—Note that the income groupings are broad enough that no one will be revealing his actual income.

After you have completed your interviewing, record on each questionnaire the Trip ID#, Destination, Car Type, Date, and Interviewer Number in the box labeled "FOR OFFICE USE ONLY." This information can be found on your TRIP ASSIGNMENT SHEET.

At this time, also count the total number of passengers on the train and record it on the TRIP ASSIGNMENT SHEET.

Keep the TRIP ASSIGNMENT SHEET and the completed questionnaires for this trip together.

## SURVEY METHODOLOGY FOR TRAIN TRAVEL

The universe, or population to be studied, is total *non-resident* train travelers exiting the area. This definition excludes permanent residents of the area (including students) and persons who may be commuting to and from work on a regular basis by train.



If the survey area is small and served by one, or only a few, terminals, consideration should be given to interviewing passengers as they board the train. When the survey covers a large geographic area, and there may be a number of places where a person can board, it may be more practical to design the sample so that interviewing is conducted enroute. Enroute interviewing is especially practical if the distance between the last stop in the survey area and the first stop outside the area is great enough to permit completing all interviews in the travel time allowed. However, this may not always be possible when there are heavy passenger loads. In such instances it may be necessary to begin interviewing before the last stop in the area or to conduct the interviews at a terminal: in either case additional screening devices are required to establish that the respondent intends to leave the area and will not spend additional time and money there. For enroute interviews, a way must also be developed to include passengers that board along the route in the sample selection.

Whether interviewing is done at a terminal or enroute, the first step is to determine the number of trips that will be sampled and develop a sample selection procedure for which trips will be included.

## Sample Design Methodology

The sample is of a probability design, using several stages of stratification, and the selection of a single respondent from each party drawn into the sample.

A number of factors need to be considered in determining whether there will be an additional selection of respondents among the passengers or whether a complete census of all passengers will be taken from the sample trips; this decision is dependent upon the number of trips that will be sampled throughout the course of the survey period. Generally, it is better to sample a smaller number of respondents from a larger number of trips to provide better dispersion of interviews. On the other hand, it is usually less expensive to work with a smaller number of trips and interview more respondents from each of the sampled trips.

While conducting a census of each trip chosen for the sample simplifies field administration and weighting in the tabulation process, it may be desirable to select a sub-sample of respondents from each trip in order to spread the interviewing out over a larger number of trips. If this is the case, it is necessary to keep field

records and obtain the number of passengers in each of the different types of accommodations—coach, roomette, and sleepers—in the event that the number of contacts, including both qualified and non-qualified travel parties, is not in the same proportion.

## Determining the Number of Trips to be Sampled

Factors that affect the number of trips that will be sampled include:

1. Total sample size.
2. Dispersion of the interviews throughout the survey period.
3. The number of interviews that may be expected from each of the sampled trips, which depends upon the amount of time that is available for interviewing enroute, the number of interviewers that are available, and whether a census will be taken or sub-sample of passengers will be interviewed.
4. Average passenger loads.

The number of train trips that will be sampled from each exiting point during the survey period is determined based on the number of trips that normally flow through the point. Should train schedules change during the course of the survey period, the sample distribution should be modified accordingly.

## Selection of Sample Trips

The basic sample frame for selecting the trips that will be surveyed throughout the survey period is a complete listing of the departure times of all trips leaving the survey area. Although the time of the *last* stop may vary, depending upon route followed, this systematic ordering of schedules will provide a reference point for an objective selection.

One method of selecting the individual trips that will be included in the sample is shown in the following illustration. For example, if there are three exit points in the survey area, the number of trips passing through each of the points during a specified time period provides a base for allocating the number of trips to be sampled from each exit. This allocation of trips by exit point is particularly important if trains traveling through the point exclusively serve some part of the survey area—such as a prominent tourist attraction. The following table shows the volume of traffic (in terms of the number of trips) passing

through exit points A, B and C during a normal week:

	Exit Point:		
	A	B	C
Sunday .....	3	2	1
Monday .....	3	2	1
Tuesday .....	3	2	1
Wednesday .....	3	2	1
Thursday .....	3	2	1
Friday .....	3	2	1
Saturday .....	3	2	1
Total	21	14	7

In this situation, the sample design would call for one-half of the trips to be selected from Point A, one-third from Point B, and one-sixth from Point C.

Based on the normal passenger load the distance the train travels before the first stop, let's assume that between 15 and 20 interviews with qualified respondents could be completed.

If the total sample size is set at 1,000 interviews, about 60 trips would be required during the course of the survey period—30 from Point A, 20 from Point B, and 10 from Point C.

If the survey is to be conducted throughout a period of a year and the number of trips through each point is expected to remain stable during the survey period, the number of trips passing through Point A would be 1,092 ( $21 \times 52$ ), and so on.

To select the individual trips from Point A, trips would be arrayed chronologically starting with the first day of the survey through the last trip on the last day of the survey period. Since a total of 30 trips are needed throughout the survey period, or one out of every 36 (that is, 1,092 divided by 30), select a random number between 1 and 36, and keep adding intervals of 36 until the 30th trip has been selected. If the random number chosen for the starting point was 7, this would result in sampling trip numbers 7, 43, 79, 115, and so on.

After the selection is made, it is necessary to check the distribution to make sure that the interval is not such that it results in biasing the sample toward one day of the week, or the same time of the day. For example, if the interval were 26, this would result in choosing the same trip on the same day (every other week) throughout the entire survey period.

If the interval does accidentally result in selecting "repeating" days, or time-of-day, it will be necessary

to use another method of stratification or randomize the days of the week to break the sequence.

Should the train schedules (number of trips or distribution of trips) change throughout the survey period, it is necessary to repeat the process for the remainder of the study using the new schedule. If it is known in advance that the schedule normally changes (that is, trips added or dropped during certain months), these schedule changes can be built into the original sample selection.

## Field Staff Requirements

Because of large passenger loads, one interviewer may not be able to handle all of the interviewing between the last stop in the survey area and the first stop outside. Two alternatives are available:

1. Recruit and train an interviewing staff large enough to be able to handle normal passenger loads so all interviewing can be conducted in a shorter period of time.
2. Begin interviewing before the last stop in the survey area to allow more time before the first stop outside the survey area is made.

Both of these alternatives will add complexity to field administration; the first will require devoting more time to recruiting and maintaining the interviewing staff during the course of the field work (assuming that a substantial number of interviewers are available in the locations where they are needed).

Preparation of field materials and interviewer training are discussed in detail in Chapters VI and VII. Examples of field materials are included at the end of this appendix.

## Weighting Train Samples

If a complete census is taken of each train trip that is included in the sample, the need for weighting to adjust for passenger load on a trip-by-trip basis is eliminated since trips are selected with equal probability regardless of passenger load. However, if a subsample of passengers is selected from each trip, the additional weighting step is required. Due to the complexity of this tabulation, it is recommended that assistance be obtained from a consultant or person at an academic institution. This person can also assist in advising on the level of detail that can be included in the analysis, based on the sample size.

**TRAIN ASSIGNMENT SHEET**

Job: \_\_\_\_\_  
Interviewer Numbers: \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_

ID#: \_\_\_\_\_

DAY AND DATE: \_\_\_\_\_

BOARD TRAIN IN: \_\_\_\_\_ WASHINGTON AT \_\_\_\_\_ a.m.  
p.m.

TOTAL NUMBER OF PASSENGERS ON THIS TRIP: \_\_\_\_\_

NUMBER OF COMPLETED INTERVIEWS FOR THIS TRIP, BY:

COACH: \_\_\_\_\_

ROOMETTE: \_\_\_\_\_

BEDROOM: \_\_\_\_\_

FORM COMPLETED BY: \_\_\_\_\_

(Interviewer Number)

ATTACH THIS SHEET TO QUESTIONNAIRES FOR THIS TRIP BEFORE RETURNING IT  
TO YOUR SUPERVISOR.



# TRAIN COACH SEATING DIAGRAM

		Rear			
1	2	O	O	3	4
1	2	N	N	3	4
1	2	M	M	3	4
1	2	L	L	3	4
1	2	K	K	3	4
1	2	J	J	3	4
1	2	I	I	3	4
1	2	H	H	3	4
1	2	G	G	3	4
1	2	F	F	3	4
1	2	E	E	3	4
1	2	D	D	3	4
1	2	C	C	3	4
1	2	B	B	3	4
1	2	A	A	3	4
		Front			

## SYMBOLS:

- ☒ To be interviewed (qualified respondent)
- ☐ Not to be interviewed (not qualified, or member of same travel party as respondent)
- ☒ Vacant seat
- ☒ Not leaving state

# TRAIN SLEEPING CAR DIAGRAM

1	2
3	4
5	6
7	8
9	10

ROOMETTES

A
B
C
D
E
F

BEDROOMS

## SYMBOLS:

- ☒ Qualified
- ☐ Not qualified
- ☒ Vacant seat
- ☐ Not leaving state

# **QUESTIONNAIRE TRAIN SURVEY\***

- 
0. How many persons altogether, including yourself and babies, are traveling in your party on this trip? (WRITE IN NUMBER IN TRAVEL PARTY:) \_\_\_\_\_
- 
- 1a. Are you a resident of the state of Washington? YES (TERMINATE INTERVIEW AND TALLY: ) \_\_\_\_\_  
NO (GO TO Q. 1b) \_\_\_\_\_
- 
- b. Are you the head of your travel party? YES (GO TO Q. 2)  
NO (ATTEMPT TO LOCATE; IF NOT AVAILABLE, SET ASIDE FOR LATER CONTACT)
- 
2. Thinking of this trip, and by this trip I mean since you *last entered* the state of Washington, what was the one *main* purpose of this trip to Washington?
- |  |  |
|--|--|
| ATTEND CONVENTION OR CONFERENCE..... 1                 | SHOPPING..... 9                                      |
| BUSINESS OR TRADE..... 2                               | OTHER PERSONAL OR FAMILY AFFAIRS..... 0              |
| PLEASURE OR VACATION..... 3                            | OTHER (Specify: )..... X                             |
| OUTDOOR RECREATION (HUNTING, FISHING, ETC.)..... 4     | DON'T KNOW, OR NO ANSWER..... Y                      |
| ENTERTAINMENT (THEATER, SPECTATOR SPORTS, ETC.)..... 5 | IF ANY OF THE BELOW, TERMINATE AND TALLY HERE: _____ |
| SIGHTSEEING..... 6                                     | PASSING THROUGH STATE                                |
| ATTRACTIONS (Specify: )..... 7                         | STUDENT ATTENDING SCHOOL IN WASHINGTON               |
| VISIT FRIENDS OR RELATIVES..... 8                      | COMMUTES TO WORK IN STATE, BUT LIVES OUTSIDE STATE   |
- 
3. What are some of the other purposes of this trip in Washington?
- |  |   |
|--|---|
| ATTEND CONVENTION OR CONFERENCE..... 1                 | SIGHTSEEING..... 6                      |
| BUSINESS OR TRADE..... 2                               | ATTRACTIONS (Specify: )..... 7          |
| PLEASURE OR VACATION..... 3                            | VISIT FRIENDS OR RELATIVES..... 8       |
| OUTDOOR RECREATION (HUNTING, FISHING, ETC.)..... 4     | SHOPPING..... 9                         |
| ENTERTAINMENT (THEATER, SPECTATOR SPORTS, ETC.)..... 5 | OTHER PERSONAL OR FAMILY AFFAIRS..... 0 |
|  | OTHER (Specify: )..... X                |
|  | DON'T KNOW, OR NO ANSWER..... Y         |
|  | NO OTHER PURPOSES..... N                |
- 
4. In what state or country do you presently reside? (SPECIFY STATE OR COUNTRY: ) \_\_\_\_\_
- 
5. What types of transportation did you use traveling in Washington on this trip?
- |                                       |                                  |
|---------------------------------------|----------------------------------|
| PRIVATELY OWNED CAR..... 1            | TAXI, LIMOUSINE, CITY BUS..... 7 |
| RENTAL CAR..... 2                     | COMMERCIAL BUS LINE..... 8       |
| CAMPER OR RECREATIONAL VEHICLE..... 3 | CHARTERED BUS..... 9             |
| COMMERCIAL AIRLINE..... 4             | BOAT..... 0                      |
| PRIVATE AIRPLANE..... 5               | OTHER (Specify: )..... X         |
| RAILROAD..... 6                       | DON'T KNOW, OR NO ANSWER..... Y  |
-



	SEATTLE	KING COUNTY	OUTSIDE KING COUNTY
6. What cities or places in the state of Washington did you visit or go through on this trip?			
	YES ..... 1		
	NO ..... 2		
7. For each area visited, please write in how much you and all others in your travel party spent, including credit card purchases, for each of the following items on this trip.			
Food and refreshments.....	\$ _____	\$ _____	\$ _____
Recreation and entertainment .....	\$ _____	\$ _____	\$ _____
Lodging and accommodations.....	\$ _____	\$ _____	\$ _____
Airline, bus, train, boat, rental car transportation fares.....	\$ _____	\$ _____	\$ _____
Gasoline, oil, tires, repairs.....	\$ _____	\$ _____	\$ _____
Other retail purchases or services .....	\$ _____	\$ _____	\$ _____
Anything else? .....	\$ _____	\$ _____	\$ _____
8. Please write in the number of nights spent in each area on this trip.			
	_____	_____	_____

PLEASE CIRCLE THE APPROPRIATE NUMBER, OR WRITE IN THE ANSWER, FOR THE REMAINING QUESTIONS.

9. In what types of lodgings or accommodations did you stay while in Washington?

HOTEL, MOTEL, TOURIST COURT..... 1	TENT, CAMPGROUND ..... 6
RESORT, DUDE RANCH..... 2	CAR (NOT IN CAMPGROUND) ..... 7
TOURIST HOME..... 3	HOME OF FRIENDS OR RELATIVES ..... 8
SEASONAL HOME, CABIN ..... 4	OTHER (Specify:) ..... 9
TRAILER, CAMPER, RECREATION VEHICLE..... 5	NONE..... 0

10. How many persons altogether, including yourself and babies, are traveling in your party on this trip?

NUMBER: \_\_\_\_\_

11. How many persons 18 years or older, including yourself, are traveling in your party on this trip?

NUMBER: \_\_\_\_\_

12. Please circle the code for your age group.
- |               |   |                  |   |
|---------------|---|------------------|---|
| UNDER 13..... | 1 | 35-44.....       | 5 |
| 13-17.....    | 2 | 45-54.....       | 6 |
| 18-24.....    | 3 | 55-64.....       | 7 |
| 25-34.....    | 4 | 65 OR OLDER..... | 8 |

13. Please circle the code for the last grade of school you completed.

- |                       |   |                           |   |
|-----------------------|---|---------------------------|---|
| GRADUATE STUDY.....   | 1 | HIGH SCHOOL GRADUATE..... | 4 |
| COLLEGE GRADUATE..... | 2 | SOME HIGH SCHOOL.....     | 5 |
| SOME COLLEGE.....     | 3 | 8TH GRADE OR LESS.....    | 6 |
|                       |   | NO SCHOOLING.....         | 7 |

14. Who is the head of your household?
- |                               |   |
|-------------------------------|---|
| YOURSELF.....                 | 1 |
| ANOTHER HOUSEHOLD MEMBER..... | 2 |

15. What is the occupation of the head of your household?  
IF RETIRED, CHECK HERE ☐ AND  
WRITE FORMER OCCUPATION.
- OCCUPATION:

16. Which of these groups best describes the total annual income of your household before taxes?
- |                        |   |                        |   |
|------------------------|---|------------------------|---|
| LESS THAN \$5,000..... | 1 | \$20,000-\$24,999..... | 5 |
| \$5,000-\$9,999.....   | 2 | \$25,000-\$29,999..... | 6 |
| \$10,000-\$14,999..... | 3 | \$30,000-\$34,999..... | 7 |
| \$15,000-\$19,999..... | 4 | \$35,000 OR MORE.....  | 8 |

17. Questionnaire completed by:
- |             |   |
|-------------|---|
| MALE.....   | 1 |
| FEMALE..... | 2 |

NAME

ADDRESS

CITY

STATE

ZIP CODE

HOME PHONE NUMBER

FOR OFFICE USE ONLY:

Trip ID#: \_\_\_\_\_ Destination: \_\_\_\_\_ Car Type:

Date: \_\_\_\_\_ Interviewer Number: \_\_\_\_\_

Coach.....	1
Roomette.....	2
Bedroom.....	3

\* The actual size of the questionnaire should be one page with the dimensions 8½" x 14". Questions 1 through 8 should be put on the front page and the remaining questions should be put on the back side of the page.

# APPENDIX F

## INSTRUCTIONS FOR SHIP TRAVEL SURVEY

### Washington Travel Study

#### WHEN TO INTERVIEW

Each Trip Assignment Sheet specifies the date and time that you are to be at the dock boarding area.

#### WHERE TO INTERVIEW

All interviewing will be done in, or around, the designated boarding area. It is important that you interview only passengers, so do not attempt to complete interviews in other areas since you could possibly contact non-qualified respondents.

If a number of travel parties arrive at the same time, and it is not possible to interview all qualified passengers, you will have to board the ship later in the day to interview them. (A provision is made for this type of situation on the questionnaire.)

#### WHOM TO INTERVIEW

Not everyone boarding the ship will be a qualified respondent and screening questions are built into the questionnaire to eliminate those who do not qualify.

In order to qualify, the respondent must be:

1. A non-resident of Washington State, and
2. The head of the travel party

Persons who do not qualify include:

1. Washington State residents.
2. Students from out-of-state who are attending school in Washington but consider their place of residence their home state.
3. Those who are not the head of the travel party. (The head of the travel party is the person who is responsible for the dollar expenditures during the trip.)

Every passenger (or travel party) who boards the ship is to be contacted for screening into qualified or non-qualified respondents. All qualified respondents on the trip are to be interviewed.

#### THE QUESTIONNAIRE

The following pages explain how the questions are to be handled. **DO NOT ALLOW THE RESPONDENT TO READ THE QUESTIONNAIRE WHILE YOU ARE ASKING THE QUESTIONS.** To do so allows him to see possible replies and may confuse him.

*Question 0*—Ask this question of each person (or travel party) that you contact, and record the number of persons in the travel party on one of the lines to the right.

*Question 1a*—Washington residents are those people who live within the state and consider Washington their legal residence. Students attending a college or university within the state *are* considered residents. Note that we have also included this as a second check in Question 2, which will be discussed later.

*It is very important that the results of this question be recorded accurately.* For each person you contact before finding a qualified respondent, place a tally mark (////) in the space provided.

*Question 1b*—The *head* of the travel party is the person who is responsible for the trip expenditure. This could be either the male or female in the party.

If there is only one person in the party, he is the head. Additionally, there are no age limitations; for example, a 12-year-old traveling by himself is the head of the travel party.

If the person you contact is not the head of the party, ask who is, and attempt to locate him. If he is not with the rest of the travel party, record the name on the second page of the questionnaire, and set it aside. You will attempt to locate him later aboard ship, or when he arrives to board.

Use another questionnaire and go on to another person.

*Question 2*—Note that the question asks for the main purpose of this trip to Washington. If the respondent



gives more than one purpose, probe to determine the *main* reason.

In the lower right-hand section of responses, you will notice that we have included two classes of respondents which do not qualify which were described in detail earlier. Should the respondent fall into one of these classes, tally this in the appropriate space and attempt another contact.

Note that you can continue using the same questionnaire.

Again, it is very important that the number of persons screened out from being interviewed be tallied accurately.

*Question 3*—This question asks for other purposes of the trip to Washington; multiple answers are possible.

If the trip was taken for only one purpose, be sure to circle the code for “NO OTHER PURPOSES”—Code N. Do not confuse this alternative with the NO ANSWER alternative that appears in the question.

*Question 4*—Be sure to write legibly and do not abbreviate. The letter “I” could stand for Idaho, Illinois, Iowa, or Indiana.

*Question 5*—There are some subtle differences between the pre-listed alternatives (such as COMMERCIAL BUS LINE and CHARTERED BUS), so be sure to study them carefully so you will be able to distinguish between them when the respondent gives his answer.

*Question 6*—Note that the question includes “visit or go through” and a separate space to write in the response has been included for each of the three geographical areas.

If “Seattle” is mentioned, you simply have to circle code 1 for the response. If Seattle is not mentioned, be sure to circle code 2 so we will know that the question has not been omitted.

You are being provided with a list of the cities, places, and attractions in King County to help identify those, which should be recorded in the space under “King County.” Places mentioned that are not in King County (or Seattle) should be recorded in the space under “Outside King County.”

If the respondent does not mention any places in King County, probe to find out if he actually has visited any, because a non-resident may not be familiar with those that are actually in King County and those that are not.

*Questions 7a-c*—Ask the question only for those areas the respondent has visited or gone through on this trip as specified in Question 6.

*Question 7a*—The complete question reads, “Thinking about . . .” through each of the alternatives listed. Record the amount in the space provided for each.

If the respondent is unable to break down the amount spent for each of the types of items, ask the question which appears by the word “INDEFINITE.” It is very important that you get as complete and accurate an answer as possible for these questions.

*Questions 7b and 7c*—These questions are handled the same as Question 7a except that you read the name of the places recorded above for King County and/or Outside King County in Question 6.

*Question 8*—Note that this question on the number of nights is asked only for the areas visited in Question 6.

As in Questions 7b and 7c, you read the names of the places mentioned in King County and Outside King County.

Note the instruction to skip Question 9 if no nights were spent in any part of Washington.

*Question 9*—Multiple answers are allowed, so circle any that apply. As with Question 5, there are some subtle differences in the types of accommodations listed, so be aware of these differences.

*Question 10a*—This question refers to the total number of persons in the travel party on this trip. Circle the code that applies.

*Question 10b*—This question asks about the number 18 or older in the travel party. The question is not asked if there is only one person in the travel party, as indicated by the skip sign in Question 10a.

*Question 11*—Show the AGE GROUP/EDUCATION CARD as you ask this question. This allows people to tell only their approximate age; if anyone is

reluctant, show them that by picking a group of ages no one is asked to reveal their exact age. If he refuses his age, you estimate it and circle the code (but be sure the respondent does not notice you are doing this—some people don't like to have their ages even guessed at!) **DO NOT OMIT RESPONDENT'S AGE FROM ANY QUESTIONNAIRE.**

*Question 12*—Show Card again. Record the last grade of school completed by the respondent by circling the correct answer code.

*Question 13*—The head of household is the person who makes the most money. If you are interviewing someone in a household where two or more single adults live, the head of the household is the respondent, unless the respondent tells you otherwise. If both a husband and wife are retired and drawing pensions and social security, the husband is considered the head of the household, and you should find out his former occupation in Question 14.

*Question 14*—For this question we want to know the particular or specific job the respondent does—"sells tickets for the airline," "supervises workers for a home builder," "operates a paper loading machine," "writes and edits a company newspaper," and the like. If the head of household is retired, we want to find out what his particular job was—what he did do.

**YOU MUST GET SPECIFIC ANSWERS HERE.** Here are some examples of answers which are *not* specific enough:

Operates a machine (what kind of machine?)  
Is a salesman (what does he sell?)  
Is an engineer (what type of engineer?)

*Question 15*—Use the income show card with this question, and have the respondent point out the income group for his household. Note that the income groupings listed on the card are broad enough that no one will be revealing his actual income.

*Questions 16, 17, and 18*—It is important that you get the name, address, and telephone number of each respondent for verification purposes.

*Questions 19 through 22*—Fill in the information for sex of the respondent, date, time interview ended, and your interviewer number after completing each interview.

## **SURVEY METHODOLOGY FOR SHIP TRAVEL**

The universe, or population to be studied, is total *non-resident* travelers exiting the area by ship. This definition excludes permanent residents of the area (including students) or persons commuting to and from work by ship on a regular basis.

Because of the limited number of ship departures from most areas, it may be that stratification and clustering of departures will not be required. Probability methods, however, will be used in the selection of travel parties drawn into the sample.

Should the number of departures by ship be frequent enough to warrant a random selection of departures, the major considerations given to stratification are port of departure, passenger load, and destination if the port has outbound traffic to more than one destination.

### **Sample Design Methodology**

The sample is of a probability design, using several stages of stratification, and the selection of a single respondent from each party drawn into the sample. A number of factors need to be considered in determining whether there will be an additional selection of respondents among the passengers or whether a complete census of all passengers will be taken from the sample trips; this decision is dependent upon the number of departures that will be sampled throughout the course of the survey period.

Generally, it is better to sample a smaller number of respondents from a larger number of departures to provide better dispersion of interviews. On the other hand, it is usually less expensive to work with a smaller number of departures and interview more respondents from each.

While conducting a census of each voyage chosen for the sample simplifies field administration and weighting in the tabulation process, it may be desirable to select a sub-sample of respondents from each departure in order to spread the interviewing out over a larger number of voyages.



Determining the Number of Trips to be Sampled

Factors that affect the number of voyages that will be sampled include:

- 1. Total sample size.
- 2. Dispersion of the interviews throughout the survey period.
- 3. The number of interviews that may be expected from each of the sampled departures.

The number of voyages that will be sampled from each port during the survey period is determined based on the number of departures that normally leave the port. Should schedules change during the course of the survey period, the sample distribution should be modified accordingly.

Assuming that the survey area has two ports and Port A has three departures per week and Port B has two departures, it may be possible to sample voyages in that proportion. However, ship line officials should be contacted to determine the normal passenger load that can be expected and the amount of time that is available for interviewing between the time passengers begin to arrive at the pier and the final boarding time.

For example, if it is expected that the interviewing team can complete only ten interviews per departure at Port A, because boarding takes less time, a total of sixty trips would have to be selected. On the other hand, if it is expected that 25 interviews with qualified respondents can be completed per departure at Port B, only 16 trips would be needed.

Selection of Sample Trips

The basic sample frame for selecting the voyages that will be surveyed throughout the survey period is a complete listing of departures in chronological order. In the example mentioned above, Port A would have 156 trips per year (3 times 52) and Port B would have 104 trips per year (2 times 52).

To select the individual voyages from Port A, departures would be arrayed chronologically starting with the first departure in the first week of the survey through the last departure in the last week of the survey period. Since a total of 60 trips are needed throughout the survey period, or about two out of

every five, select a random starting point and skip one, select one, skip two, select one, skip one, etc. and continue with this procedure until 60 trips have been selected. The selection for the first five weeks might appear as follows:

<i>First Week:</i>	<i>Selected Departure</i>
1	
2 .....	×
3	
<i>Second Week:</i>	
1 .....	×
2	
3	
<i>Third Week:</i>	
1 .....	×
2	
3 .....	×
<i>Fourth Week:</i>	
1	
2	
3 .....	×
<i>Fifth Week:</i>	
1	
2 .....	×
3	

After the selection is made, it is necessary to check the distribution to make sure that the interval is not such that it results in choosing the same day throughout the entire survey period.

If the interval does accidentally result in selecting "repeating" days, it will be necessary to use another method of stratification or randomize the departures within the week to break the sequence.

In the previous example, destination was not taken into account in the selection of trips so destination should also be checked to make sure that destinations are properly distributed.

An alternative would have been stratifying the trips by destination before the sample was selected. For example, if the first and third departure each week have the same destination, while the second goes to a different destination, the departures could have been divided into the two groups. The process for selecting the departures from each is the same as described above.

Should the departure schedules change throughout the survey period, it is necessary to repeat the process



for the remainder of the study using the new schedule. If it is known in advance that the schedule normally changes (that is, departures are added or deleted) this factor can be built into the original sample selection.

## Field Staff Preparations

The number of interviewers that will be required to work each port depends largely upon the amount of time that is available for interviewing between the time the boarding area opens and the ship departs and the number of interviews needed for each trip. For example, if 20 interviews with qualified respondents are desired and there is only 30 minutes to complete the interviewing, more interviewers would be needed than if the quota is 10 interviews and an hour's time is available. In any event, it is desirable to have at least two interviewers assigned to each departure in the event that something keeps one of them from reporting for work.

Another consideration is the physical layout of the port and the number of entrances; at least one interviewer should be assigned to each entrance if there is not some point through which all passengers must funnel.

The actual procedure for selecting respondents will depend a great deal upon the layout of the facilities; the important consideration is that a systematic method be used so that the selection of respondents is not left to the interviewer's discretion.

## Respondent Selection

Under ideal conditions, respondents are selected as they enter the waiting area. A random selection procedure can be established by choosing the first person coming through the line. After the person has been interviewed (or it has been determined that he is not a qualified respondent), the next person to pick up a boarding pass is selected.

In actual practice, it may be necessary to provide an alternate method of selecting respondents, as described below; often the waiting area does not open early enough to permit contacting passengers as described above.

The following alternative procedure is one method for selecting respondents:

1. Enter the waiting area and contact the first person to your *right* in order to start interviewing.
2. If the person is a qualified respondent, interview him. If not, continue working to your right until you have interviewed one respondent.
3. After completing the interview, contact the next person who comes into the area and continue selecting respondents as if they were waiting in a line; that is, contact each person entering the area until you find a qualified respondent, and after you have completed the interview, contact the next person entering the area.

Preparation of field materials and interviewer training are discussed in detail in Chapters VI and VII. Examples of field materials are included at the end of this appendix.

## Weighting Ship Samples

If a complete census is taken of each voyage that is included in the sample, the need for weighting to adjust for passenger load on a trip-by-trip basis is eliminated since voyages are selected with equal probability regardless of passenger load. However, if a subsample of passengers is selected, the additional weighting step is required. Due to the complexity of this tabulation, it is recommended that assistance be obtained from a consultant or person at an academic institution. This person can also assist in advising on the level of detail that can be included in the analysis, based on the sample size.

## SHIP ASSIGNMENT SHEET

JOB: \_\_\_\_\_

Interviewer Number: \_\_\_\_\_

---

ID#: \_\_\_\_\_

DAY AND DATE: \_\_\_\_\_

REACH BOARDING AREA BY: \_\_\_\_\_ a.m.  
p.m.

TOTAL NUMBER OF BOARDING PASSENGERS FOR THIS TRIP: \_\_\_\_\_

NUMBER OF COMPLETED INTERVIEWS FOR THIS TRIP: \_\_\_\_\_

FORM COMPLETED BY: \_\_\_\_\_

(Interviewer Number)

ATTACH THIS SHEET TO QUESTIONNAIRES FOR THIS TRIP BEFORE RETURNING IT  
TO YOUR SUPERVISOR.

# **QUESTIONNAIRE SHIP SURVEY\***

0. How many persons altogether, including yourself and babies, are traveling in your party on this trip? (WRITE IN NUMBER IN TRAVEL PARTY:) \_\_\_\_\_

1a. Are you a resident of the state of Washington? YES (TERMINATE INTERVIEW AND TALLY IN APPROPRIATE SPACE)  
NO (GO TO Q. 1b)

1b. Are you the head of your travel party? YES (GO TO Q. 2)  
NO (LOCATE; THEN GO TO Q. 2)

2. Thinking of this trip, and by this trip I mean since you *last entered* the state of Washington, what was the one *main* purpose of this trip to Washington?

ATTEND CONVENTION OR		SHOPPING .....	9
CONFERENCE.....	1	OTHER PERSONAL OR FAMILY	
BUSINESS OR TRADE.....	2	AFFAIRS.....	0
PLEASURE OR VACATION.....	3	OTHER (Specify:)	X
OUTDOOR RECREATION (HUNTING,		DON'T KNOW, OR NO ANSWER .....	Y
FISHING, ETC.).....	4	IF ANY OF THE BELOW, TERMINATE	
ENTERTAINMENT (THEATER,		AND TALLY HERE:.....	
SPECTATOR SPORTS, ETC.).....	5	STUDENT ATTENDING SCHOOL IN	
SIGHTSEEING.....	6	WASHINGTON	
ATTRACTIONS (Specify:)	7	COMMUTES TO WORK IN STATE, BUT	
VISIT FRIENDS OR RELATIVES .....	8	LIVES OUTSIDE STATE	

3. What are some of the other purposes of this trip in Washington?

ATTEND CONVENTION OR		SIGHTSEEING .....	6
CONFERENCE.....	1	ATTRACTIONS (Specify:)	7
BUSINESS OR TRADE.....	2	VISIT FRIENDS OR RELATIVES.....	8
PLEASURE OR VACATION.....	3	SHOPPING .....	9
OUTDOOR RECREATION (HUNTING,		OTHER PERSONAL OR FAMILY	
FISHING, ETC.).....	4	AFFAIRS.....	0
ENTERTAINMENT (THEATER,		OTHER (Specify:)	X
SPECTATOR SPORTS, ETC.).....	5	DON'T KNOW, OR NO ANSWER .....	Y
		NO OTHER PURPOSES .....	N

4. In what state or country do you presently reside? (SPECIFY STATE OR COUNTRY:) \_\_\_\_\_

5. What types of transportation did you use traveling in Washington on this trip?

PRIVATELY OWNED CAR .....	1	TAXI, LIMOUSINE, CITY BUS .....	7
RENTAL CAR .....	2	COMMERCIAL BUS LINE .....	8
CAMPER OR RECREATIONAL		CHARTERED BUS .....	9
VEHICLE .....	3	BOAT .....	0
COMMERCIAL AIRLINE .....	4	OTHER (Specify:)	X
PRIVATE AIRPLANE.....	5	DON'T KNOW, OR NO ANSWER .....	Y
RAILROAD.....	6		



	SEATTLE	KING COUNTY	OUTSIDE KING COUNTY
6. What cities or places in the state of Washington did you visit or go through on this trip? (IF KING COUNTY NOT MENTIONED, PROBE.)	YES ..... 1 NO ..... 2		
7a. (IF VISITED SEATTLE, ASK:) Thinking about your visit in Seattle, how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about ... ? (IF UNDECIDED) Well, just your best guess.			
Food and refreshments.....	\$ _____	\$ _____	\$ _____
Recreation and entertainment .....	\$ _____	\$ _____	\$ _____
Lodging and accommodations.....	\$ _____	\$ _____	\$ _____
Airline, bus, train, boat, rental car transportation fares.....	\$ _____	\$ _____	\$ _____
Gasoline, oil, tires, repairs.....	\$ _____	\$ _____	\$ _____
Other retail purchases or services.....	\$ _____	\$ _____	\$ _____
Anything else? .....	\$ _____	\$ _____	\$ _____
INDEFINITE: Well, what is your best guess for the total amount spent? .....	\$ _____	\$ _____	\$ _____
b. (IF VISITED KING CO., ASK:) Thinking about your visit in (PLACES LISTED IN KING COUNTY) how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about ... ?			
c. (IF VISITED OTHER AREAS IN WASHINGTON, ASK:) Thinking about your visit in (OTHER PLACES IN WASHINGTON), how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about ... ?			

8. ASK ONLY FOR AREAS VISITED IN Q. 6:	NUMBER OF NIGHTS	NONE	DON'T KNOW, NO ANSWER
On this trip, how many nights did you spend in ...			
(the city of Seattle?).....SEATTLE	_____	0	Y
(places listed in King County?).....KING CO.	_____	0	Y
(other places in Washington?).....WASHINGTON	_____	0	Y
(IF NO NIGHTS SPENT IN ANY AREA, GO TO Q. 10a)			

9. In what types of lodgings or accommodations did you stay while in Washington?			
HOTEL, MOTEL, TOURIST COURT..... 1	TENT, CAMPGROUND .....	6	
RESORT, DUDE RANCH..... 2	CAR (NOT IN CAMPGROUND).....	7	
TOURIST HOME..... 3	HOME OF FRIENDS OR RELATIVES...	8	
SEASONAL HOME, CABIN..... 4	OTHER (Specify):.....	9	
TRAILER, CAMPER, RECREATION VEHICLE..... 5	DON'T KNOW, OR NO ANSWER .....	0	

10a. How many persons altogether, including yourself and babies, are traveling in your party on this trip?	1 (GO TO Q. 11)..... 1
	2 3 4 5 6 7 8 9
	10 OR MORE ..... 0
	DON'T KNOW, OR NO ANSWER ..... X

b. And, how many persons 18 years or older, including yourself, are traveling in your party on this trip?	NUMBER: _____
	DON'T KNOW, OR NO ANSWER ..... Y

11. (SHOW AGE CARD) Please show me into which age group you fall. (IF REFUSED, ESTIMATE AND CIRCLE CODE.)	UNDER 13 ..... 1	35-44 ..... 5
	13-17 ..... 2	45-54 ..... 6
	18-24 ..... 3	55-64 ..... 7
	25-34 ..... 4	65 OR OLDER ..... 8

12. (SHOW EDUCATION CARD) Please point out the last grade of school you completed.	
GRADUATE STUDY ..... 1	SOME HIGH SCHOOL ..... 5
COLLEGE GRADUATE ..... 2	8TH GRADE OR LESS ..... 6
SOME COLLEGE ..... 3	NO SCHOOLING ..... 7
HIGH SCHOOL GRADUATE ..... 4	NO ANSWER ..... 8

13. Who is the head of your household?	RESPONDENT ..... 1
	OTHER HOUSEHOLD MEMBER ..... 2

14. What is the occupation of the head of your household? IF RETIRED, CHECK HERE <input type="checkbox"/> AND ASK for <u>FORMER</u> OCCUPATION.	OCCUPATION: _____
--	-------------------

15. (SHOW INCOME CARD) Will you point out which of these groups best describes the total annual income of your household before taxes?	LESS THAN \$5,000 ... 1	\$25,000-\$29,999 ... 6
	\$5,000-\$9,999 ..... 2	\$30,000-\$34,999 ... 7
	\$10,000-\$14,999 ..... 3	\$35,000 OR MORE ..... 8
	\$15,000-\$19,999 ..... 4	DON'T KNOW, OR NO ANSWER. 9
	\$20,000-\$24,999 ..... 5	REFUSED ..... 0

16. May I please have your name in case the re-search company wants to check my work?	NAME: _____
---	-------------

17. And your home address is: ADDRESS: _____	CITY: _____	ZIP CODE: _____
--	-------------	-----------------

18. And your home telephone number: _____	AREA CODE: _____	PHONE #: _____
	REFUSED ..... X	NO PHONE ..... Y

Thank you very much. Have a pleasant trip!

19. SEX OF RESPONDENT: MALE ..... 1 FEMALE ..... 2

20. DATE: \_\_\_\_\_

21. TIME ENDED: \_\_\_\_\_ AM  
PM

22. INTERVIEWER NUMBER: \_\_\_\_\_

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# Appendix G

## INSTRUCTIONS FOR RESIDENT TRAVEL SURVEY

### INTERVIEWING TECHNIQUES

On the questionnaire, the questions you are to read aloud are in Caps And Lower Case—Just Like What You Are Now Reading. INSTRUCTIONS TO YOU, WHICH YOU READ TO YOURSELF ARE USUALLY IN *ALL CAPS* LIKE THIS.

10. How many persons altogether, including yourself and babies, were traveling on the last trip?

1 (GO TO Q. 11).....①  
2 3 4 5 6 7 8 9  
10 OR MORE .....0  
DON'T KNOW, OR NO ANSWER .....X

In the above example, you read the question, but not the possible replies. Replies are usually marked by circling the number or letter opposite the respondent's reply, as the code "1" is circled above. Be sure to circle neatly, covering only one number or letter with each circle.

If you are in doubt about how to mark any reply, write it out and let us code it.

#### Other (Specify:)

The answer "OTHER (Specify:)" appears on some of the questions. When it does, there will be a line beside it or under it. This means we want you to write in any answers the respondent may give to you that have not been provided for you on the questionnaire. When the answer "OTHER" appears on a question that does not have "Specify" beside it and there is no line on which to write an answer, you are not expected to write in the actual answer but merely to circle the code for "OTHER."

### HOW TO SELECT RESPONDENTS

In this study, the respondent will be either the male or female head of household, or any member of the

household who has taken a trip away from home in the past 12 months and stayed overnight.

Respondent selection is built into the questionnaire with a series of questions to qualify the individual by means of a series of screening questions using skip signs.

It is important that you become completely familiar with these skip signs, and the rest of the questionnaire, before you begin interviewing.

### THE QUESTIONNAIRE

After you have made contact with the household and are speaking with a responsible individual (someone other than a child), record the time the interview started, the telephone number, your interviewer number, and continue with the introduction.

*Questions 1a-1g*—This series of questions is used to establish which member of the household will be interviewed. The sequence goes from:

1. The head of household who answered the phone.
2. Another head of household.
3. Another member of the household who may qualify because he/she has taken an overnight trip away from home during the past 12 months.

Be sure to follow the skip signs accurately in order to select the proper respondent.

Note that under certain circumstances in Questions 1e, 1f, and 1g, you might skip to demographic questions on the last page of the questionnaire if the respondent, or another member of the household, has not taken a trip or is not available for the interview.

*Question 2*—If the respondent gives you a range (such as "5 to 10"), probe and try to determine a more exact number.

*Question 3*—Note that this question asks about the last trip—not the longest one.

*Question 4*—If the trip was for both pleasure and business, circle only code 3. There should be no multiple answers to this question.

*Question 5*—There are some subtle differences between the pre-listed alternatives (such as COM-

MERCIAL BUS LINE and CHARTERED BUS), so be sure to study them carefully so you will be able to distinguish between them when the respondent gives his answer.

*Question 6*—What we want to know is the different types of activities participated in during the trip (visiting friends, sightseeing, various types of sports, etc.). Probe for as many different types of responses as possible.

*Question 7*—Note that the question includes “*visit or go through*” and that a separate space to write in the response has been included for each of the three geographical areas.

If “Seattle” is mentioned, you simply have to circle Code 1 for the response. If Seattle is not mentioned, be sure to circle Code 2 so we will know that the question has not been omitted.

You are being provided with a list of the cities, places, and attractions in King County to help identify those which should be recorded in the space under “King county.” Places mentioned that are not in King county (or Seattle) should be recorded in the space under “Outside King County.”

If the respondent does not mention any places in King County, probe to find out if he actually has visited any because he may not be familiar with those that are actually in King County and those that are not.

*Question 8a-c*—Ask the question only for those areas the respondent has visited or gone through on the last trip as specified in Question 7.

*Question 8a*—The complete question reads “Thinking about . . .” through each of the alternatives listed. Record the amount in the space provided for each.

If the respondent is unable to break down the amount spent for each of the types of items, ask the question which appears by the word “INDEFINITE.” It is very important that you get as complete and accurate an answer as possible for these questions.

*Question 8b and 8c*—These questions are handled the same as Question 8a except that you read the names of the places recorded above for King County and/or Outside King County in Question 7.

*Question 9*—Note that this question on the number

of nights is asked only for the areas visited in Question 7.

As in question 8b and 8c, you read the names of the places mentioned in King County and Outside King County.

*Question 10a*—This question refers to the total number of persons in the travel party on this trip. Circle the code that applies.

*Question 11b*—This question asks about the number 18 or older in the travel party. The question is not asked if there is only one person in the travel party, as indicated by the skip sign in Question 10.

*Questions 12,13*—In these questions, you read the alternatives to the respondent until he indicates his (age) (education) or until an answer is volunteered.

*Question 14*—The head of household is the person who makes the most money. If you were interviewing in a household where two or more single adults live, the head of household is the respondent, unless the respondent tells you otherwise. If both a husband and a wife are retired and drawing pensions and social security, the husband is considered the head of household. For this question we want to know the particular or specific job—“sell tickets for the airline,” “supervises workers for a home builder,” “operates a paper loading machine,” “writes and edits a company newspaper,” and the like. If the head of household is retired, we want to find out what his particular job was—what he did do.

**YOU MUST GET SPECIFIC ANSWERS HERE.** Here are some examples of answers which are not specific enough:

Operates a machine (what kind of machine?)  
Is a salesman (what does he sell?)  
Is an engineer (what type of engineer?)

*Question 15a-g*—As with Questions 1a-g, there are a series of questions to determine the income level. All parts of the question will not be asked of each respondent, so be sure to follow the skip signs.

*Question 16,17*—It is essential that the respondent's name and address be recorded accurately, including the zip code. **DO NOT OMIT THE ADDRESS FROM ANY QUESTIONNAIRE.**

When you have finished the interview, thank the respondent. Be sure to fill in the sex of the respondent, the date, the time the interview ended, and the interview length.



## **SURVEY METHODOLOGY FOR RESIDENT TRAVEL**

The universe, or population to be studied, is total telephone households in the survey area. The definition includes all telephone households (listed and unlisted) occupied by residents of the area, including college students.

The total household concept provides a base to establish the percentage of households with any member that traveled within the survey area.

### **Travel Definition**

In order to define resident "travel," certain limitations must be placed upon the definition of travel within the scope of the methodology that is recommended.

Conceptually, a trip would include any travel away from the person's place of residence for any purposes, regardless of the distance or frequency. However, to obtain complete, detailed survey information on all travel would require either the use of a substantial number of diary placements throughout the survey period (because respondents could not be expected to maintain a diary for more than a few weeks) or a substantial number of telephone interviews measuring travel in detail for no more than a few days preceding the interview (because of problems with memory recall or overburdening the respondent with a very lengthy questionnaire).

As a practical alternative, the definition of "travel" is limited to trips taken away from home in the past twelve months in which the person spent one or more nights away from home.

### **Sample Design Methodology**

The sample is of probability design, using the distribution of households throughout the survey area as a base, and the selection of a single respondent from each household.

### **Determining the Number of Households to be Sampled**

Because the basic selection of households drawn into the sample will include both those that qualify as having traveled and those that do not, the expected

ratio between the two must be taken into account when the total sample size is chosen if there is a goal for a minimum number of completed interviews with qualified travel households. It is important to keep in mind that the physical size of the geographic area being surveyed could have a major effect on the ratio; the smaller the area, the more likely a person would be to return to his home rather than staying overnight and, thus, the incidence of finding households where some member spent time away from home overnight would be smaller than if the survey covered a large geographic area.

The problem of determining the approximate number of total households that need to be drawn into the sample can be solved with a short telephone survey of a few hundred to determine what the incidence of overnight travel is in the survey area. For example, if 50 percent of the households qualified, the total number of households drawn into the original sample would have to be doubled to produce the desired number of interviews. If about only 25 percent qualified, the sample would have to be four times as large.

Another alternative is to set a quota of completed interviews among qualified respondents (those taking a trip away from home overnight in the past twelve months) and continue interviewing until the quota has been met. Using this technique requires a great deal of planning and constant control of the interviewing to make sure that all segments of the universe are being worked; failure to do this could bias the results. For example, it is possible that the quota of qualified interviews would be completed from the first part of the sample list if all parts of the sample list were not worked throughout the course of the study.

In the course of the interviewing, non-qualified respondents would also be interviewed on a limited number of measurements, such as demographics, to provide a comparison between the characteristics of qualified and nonqualified households. The number of interviews from each group also serves to establish the ratio between the two since this ratio is applied to the total number of households in the survey area (the known projection base) in order to determine the number of qualified households.

After the total number of interviews has been determined, the next step is to distribute them throughout the survey area in their proper proportion—usually on a geographic basis, using political subdivisions. As an example, the following table shows the distribu-



tion of a sample of 3,000 based on an eight-county survey area.

County	Total Households in County	% Distribution of Households	Number of Interviews
A.....	90,000	32.3%	969
B.....	20,000	7.2	216
C.....	70,000	25.2	756
D.....	60,000	21.6	648
E.....	15,000	5.4	162
F.....	15,000	5.4	162
G.....	5,000	1.8	54
H.....	3,000	1.1	33
Total	278,000	100.0	3,000

The total number of interviews assigned to each county is further distributed equally throughout the survey period. In the above example, County A would have about 80 interviews per month if the survey covered a twelve-month period (969 divided by 12). Of course, some rounding and forcing will be required to balance the sample exactly.

## Selection of Telephone Numbers

Because the universe includes all telephone households, both those with listed and unlisted numbers, names and numbers cannot be pulled directly from telephone directories.

While it is possible to obtain computer-generated random numbers for phone surveys, this can often be inefficient because many of the numbers will not be in service. For example, if 2,000 numbers out of a possible 10,000 are in use in an exchange, a randomly generated series of phone numbers could be expected to produce only one out of five that are usable.

Generally, phone numbers are assigned in some orderly fashion rather than randomly put into service. An alternative method of selecting numbers is to use the phone book as a starting point and randomly select only the exchange and the first two digits of the number. The telephone number is then completed by filling in the last two digits from a table of random numbers, resulting in a sample of both listed and unlisted numbers. While there will still be some num-

bers that are not in service, this approach will generally reduce the number of non-working numbers drawn into the sample and improve efficiency in interviewing by cutting down on the time that is wasted dialing numbers that are not in service.

The first step in selecting the phone numbers is to obtain all telephone directories that cover the survey area. A matching process is then required to eliminate listings that appear in more than one directory by spot checking names, addresses, and numbers from one book to another. For example, if a suburban city has its own published directory, but the listings also appear in a book that is published for the central city, the suburban directory can be discarded in the sample selection process.

Once the appropriate books have been gathered, the next step is to estimate the number of listings in each book. In most instances, it will not be enough to merely count the number of pages to determine an interval because the books will have different formats and type sizes—one may be four columns wide with small type and another two columns wide with large type.

The estimate of the number of listings for each directory provides the base for determining how many numbers will be selected from each. If the directories are such that a book, or a combination of books, covers an area used in the basic sample distribution, such as a county, that book can be treated separately from the others.

The page interval for each book is determined by dividing the number of interviews needed from each book into the number of pages (excluding those that are exclusively state, county, or local listings). For example, if 200 interviews (phone numbers) are to be selected from a book with 500 pages, the interval would require skipping two pages, then three pages, then two pages, and so on.

Two methods are commonly used in telephone interviews—one is to discard refusals and people who cannot be contacted after a few calls and the other is to permit substitutions for refusals and not-at-homes.

If substitutions are not allowed, it will be necessary to select more primary numbers than the total number of interviews you wish to complete. Experience shows that about 70 percent of the total sample can be interviewed in a normal survey situation (the other 30 percent are people who cannot be reached

with repeated callbacks or refuse to be interviewed). Therefore, if the total sample of completed interviews (including qualified and non-qualified respondents) is 3,000 over the period of the survey, it will require drawing a sample of about 4,300 numbers (3,000 divided by 70 percent).

If substitutions are going to be used, the number of phone numbers selected will be equal to the total number of interviews you want to complete and the need for extensive oversampling is eliminated.

After the interval for the number of pages has been determined, select one column from the page at random, select a line going down the page at random, and this becomes the base number that will be used.

At this point, only the exchange and the first two digits are recorded. The last two digits will come from a table of random numbers in order to include both listed and unlisted numbers in their proper proportion. There will be one call record sheet for each primary number and each call record also provides for alternate numbers—numbers that the interviewer can use if the primary number is not in service or if it is a business number. If no substitutes are allowed, these are the only times in which the alternate numbers can be used.

If alternates are allowed in the sample design, the interviewer can use the alternate if the primary number is a non-working number, or a business number, the respondent refuses to be interviewed, or if the household cannot be contacted after the original call and three callbacks.

However, regardless of which method is being used, the alternate numbers will also be derived from the base of the randomly-selected exchange number and first two digits, as shown below in the illustration using four randomly selected base numbers:

In each case, the number selected for the primary and the alternate numbers use the same base figure and the last two digits come from a table of random numbers.

Since the last two digits of the phone number are selected at random, it is no longer possible to identify the address of the selected phone number, other than on a wide area basis, such as the exchange number. Consequently, there is no value in recording the name and address of the selected respondent. Should exchanges cross over the geographic boundaries of the survey area to any great extent (the phone company can provide an idea of how often this might happen), a screening question may be necessary on the questionnaire in order to eliminate those households outside the survey area at the beginning of the interview so time will not be spent in interviewing people who do not qualify.

Field Administration

Interviewing can be conducted from either a central location or from the interviewers' homes. While central location interviewing will probably result in additional costs for long distance phone charges, it does have the advantage of providing more direct control over the interviewing staff.

If a substantial number of interviews are to be completed in a few cities in the survey area during the course of the interviewing period, it may be more economical to recruit interviewers living in the city to save the cost of long distance phone calls. Even with interviewers located throughout the survey area, some long distance calls will probably be required.

The additional administrative costs of recruiting and training interviewers throughout the survey area will have to be weighed against the cost of telephone

	Interview No.			
	1	2	3	4
Directory page number.....	43	45	48	50
Base number selected				
from phone book .....	385-67	334-52	334-89	367-34
Primary number .....	385-6711	334-5221	334-8932	367-3486
Alternate No. 1 .....	385-6727	334-5216	334-8964	367-3452
Alternate No. 2 .....	385-6763	334-5242	334-8958	367-3417
Alternate No. 3 .....	385-6792	334-5258	334-8916	367-3412



charges to determine which is more economically feasible.

Even if the interviewing is being done from a central location, interviewing specifications will have to be prepared and a training session held, as discussed in Chapters VI and VII.

As with personal interviews conducted to research other modes of transportation, it is important that schedules be established for interviewers to return their work as soon as it is completed.

The same quality control, editing and coding, and preliminary tabulation procedures discussed in Chapters VIII and IX for the various modes of transportation also apply to resident travel.

Examples of field materials appear at the end of this appendix.

## Weighting Resident Travel Surveys

Using the sample selection procedures described above, all telephone households in the survey have an equal probability of being selected, and theoretically, no weighting should be required. However, there may be times when disproportionate completion rates will cause the sample to be out of balance with known population data. For example, if in one county of the survey area, the completion rate of assigned telephone numbers is substantially lower, or higher, than the average of 70 percent mentioned earlier (either because of a large number of refusals or households that could not be contacted with the original call and two callbacks) the percentage of total completed interviews from that county could be lower, or higher, than its proper proportion. An example of this effect is shown in the following table:

County	Households		Interviews Assigned		Completion Rate (% of Total Assigned)	Number of Completed Interviews	% of Total Completed Interviews
	Number	% of Total Survey Area	Number	% of Total Survey Area			
A .....	240,000	85.7%	1,225	85.7%	72.0%	882	88.2%
B .....	30,000	10.7	153	10.7	53.6%	82	8.2
C .....	10,000	3.6	51	3.6	70.6%	36	3.6
Total	280,000	100.0%	1,429*	100.0%		1,000	100.0%

\* Based upon 70 percent Completion Rate (1,429 × 70% = 1,000).

While the distribution of interviews assigned matches the distribution of total households, the higher than average completion rate in County A and the lower than average completion rate in County B results in a sample that over-represents A and under-represents B. The 2.5 percentage points discrepancy between A and B will probably have little effect on any one result in the total sample and would not be significant, but any breakdowns on a county-by-county basis would show a discrepancy with known data.

In the example above, each interview would be multiplied by 280 (280,000 divided by 1,000) if the results were projected out to total households. The projected result would show 246,960 households in County A and 22,960 in County B, which differs from the known distribution of households.

Note: Results should not be reported for County C by itself because of the small sample base, and County B is marginal with 82 completed interviews.

A correction factor could be applied to Counties A and B to put them in their proper proportion, if this is deemed necessary. If the results are to be used for internal analysis only, and it is recognized that the sample is not in *perfect* balance, weighting would probably not be necessary. However, if the results are going to be published, it is probably better to weight to the known population data for consistency. Due to the complexity of this tabulation, it is recommended that assistance be obtained from a consultant or person at an academic institution. This person can also assist in advising on the level of detail that can be included in the analysis, based on the sample size.



# **QUESTIONNAIRE RESIDENT TRAVEL SURVEY\***

## TIME

INTERVIEW STARTED:\_\_\_\_\_TELEPHONE NUMBER:\_\_\_\_\_INTERVIEWER NUMBER:\_\_\_\_\_

Hello, I'm \_\_\_\_\_, with Belden Associates, a research company. We're conducting a study among a cross-section of people in your area. We are not selling anything. We just want your opinions.

- |  |  |
|--|--|
| 1a. First, may I please speak with either the male or female head of your household?   | HOUSEHOLD HEAD AVAILABLE OR<br>RESPONDENT IS HOUSEHOLD HEAD... 1<br>NEITHER HOUSEHOLD HEAD<br>AVAILABLE (GO TO Q. 1e)..... 2 |
| b. Have you personally taken any trips during the past twelve months in which you spent at least one night away from home within Washington State?                                       | YES (GO TO Q. 2)..... 1<br>NO..... 2   |
| c. Is there another head of your household who took any such trips?  | YES ..... 1<br>NO, OR NO OTHER HOUSEHOLD HEAD<br>(GO TO Q. 1e) ..... 2   |
| d. May I please speak with him or her?   | OTHER HOUSEHOLD HEAD AVAILABLE<br>(GO TO Q. 1g).<br>OTHER HOUSEHOLD HEAD NOT<br>AVAILABLE ..... 2                            |
| e. Is there any other member of your household who took any trips during the past twelve months in which he or she spent at least one night away from home within Washington State?      | YES ..... 1<br>NO (GO TO Q. 12)..... 2   |
| f. May I speak with him or her?  | RESPONDENT AVAILABLE..... 1<br>RESPONDENT NOT AVAILABLE (GO TO<br>Q. 12)..... 2  |
| g. (WHEN SPEAKING WITH RESPONDENT, ASK:) Have you personally taken any trips during the past twelve months in which you spent one or more nights away from home within Washington State? | YES ..... 1<br>NO (GO TO Q. 12)..... 2   |
| 2. About how many trips of this type did you take during the past twelve months?   | NUMBER OF TRIPS: _____<br>DON'T KNOW, OR NO ANSWER..... Y  |

- 
3. Now, thinking just about the most recent trip—not necessarily the longest one—during what month did you start that trip?

JANUARY .....	1	JULY .....	7
FEBRUARY .....	2	AUGUST .....	8
MARCH .....	3	SEPTEMBER .....	9
APRIL .....	4	OCTOBER .....	0
MAY .....	5	NOVEMBER .....	X
JUNE .....	6	DECEMBER .....	Y
		DON'T KNOW, OR NO ANSWER .....	N

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4. Was the most recent trip for pleasure, for business, or a combination of business and pleasure?

PLEASURE .....	1
BUSINESS .....	2
COMBINATION OF BUSINESS AND PLEASURE .....	3
OTHER (Specify:)	4
DON'T KNOW, OR NO ANSWER .....	Y

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5. What types of transportation did you use while traveling within the state on that trip?

PRIVATELY OWNED CAR .....	1
RENTAL CAR .....	2
CAMPER OR RECREATIONAL VEHICLE .....	3
COMMERCIAL BUS LINE .....	4
CHARTERED BUS .....	5
COMMERCIAL AIRPLANE .....	6
OTHER (Specify:)	7
DON'T KNOW, OR NO ANSWER .....	Y

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6. What are some of the other things you or other people with you did on that trip?

7. What cities or places in the state of Washington did you visit or go through on that trip? (IF KING COUNTY NOT MENTIONED, PROBE.)	SEATTLE	KING COUNTY	OUTSIDE KING COUNTY
	YES..... 1		
	NO ..... 2		

8a. (IF VISITED SEATTLE, ASK:) Thinking about your visit in Seattle, how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ? (IF UNDECIDED:) Well, just your best guess.

Food and refreshments.....	\$ _____	\$ _____	\$ _____
Recreation and entertainment .....	\$ _____	\$ _____	\$ _____
Lodging and accommodations.....	\$ _____	\$ _____	\$ _____
Airline, bus, train, boat, rental car transportation fares .....	\$ _____	\$ _____	\$ _____
Gasoline, oil, tires, repairs.....	\$ _____	\$ _____	\$ _____
Other retail purchases or services .....	\$ _____	\$ _____	\$ _____
Anything else? .....	\$ _____	\$ _____	\$ _____
INDEFINITE: Well, what is your best guess for the total amount spent?.....	\$ _____	\$ _____	\$ _____

b. (IF VISITED KING CO., ASK:) Thinking about your visit in (PLACES LISTED IN KING COUNTY), how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ?

c. (IF VISITED OTHER AREAS IN WASHINGTON, ASK:) Thinking about your visit in (OTHER PLACES IN WASHINGTON), how much did you and all others in your party spend, including credit card purchases, for each of the following items? What about . . . ?

9. (ASK ONLY FOR AREAS VISITED IN Q. 7:)	NUMBER OF NIGHTS	NONE	DON'T KNOW, NO ANSWER
On that trip, how many nights did you spend in			
(the city of Seattle)? ..... SEATTLE	_____	0	Y
(places listed in King County)? KING CO.	_____	0	Y
(other places in Washington)? . WASHINGTON	_____	0	Y

10. How many persons altogether, including yourself and babies, were traveling on the last trip?	1 (GO TO Q. 12)..... 1
	2 3 4 5 6 7 8 9
	10 OR MORE..... 0
	DON'T KNOW, OR NO ANSWER..... X

11. And how many persons 18 years or older, including yourself, were traveling on that trip?	NUMBER: _____
	DON'T KNOW, OR NO ANSWER..... X



12. Now, I would like to ask you a few additional questions for classification purposes only.

In which of the following age groups  
do you belong? Are you ... (ASK  
FOR EACH AGE GROUP UNTIL  
RESPONDENT ANSWERS  
AFFIRMATIVELY:)

Under 13 years of age	1	35-44 years of age	5
13-17 years of age	2	45-54 years of age	6
18-24 years of age	3	55-64 years of age	7
25-34 years of age	4	65 years of age or older	8
		REFUSED	Y

13. What was the last grade of school you  
completed? Did you complete .....  
(ASK FOR EACH EDUCATION LEVEL  
UNTIL RESPONDENT ANSWERS "NO":)

No schooling	1	Some college	5
8th grade or less	2	College graduate	6
Some high school	3	Graduate study	7
High school graduate	4	NO ANSWER	8

14. What is the occupation of the head of your  
household?

OCCUPATION:

(IF RETIRED, CHECK HERE: ( ), AND ASK  
FOR FORMER OCCUPATION.)

15a. Into which of the following income groups  
does your family's total annual income fall?  
Is it above or below \$15,000 a year?

BELOW \$15,000	1
ABOVE \$15,000 (GO TO Q. 15d)	2
REFUSED (GO TO Q. 16)	3

b. Would that be above or below \$5,000 a year?

BELOW \$5,000 (GO TO Q. 16)	1
ABOVE \$5,000	2
REFUSED (GO TO Q. 16)	3

c. Is it above or below \$10,000 a year?

BELOW \$10,000 (GO TO Q. 16)	1
ABOVE \$10,000 (GO TO Q. 16)	2
REFUSED (GO TO Q. 16)	3

d. Would that be above or below \$25,000 a year?

BELOW \$25,000	1
ABOVE \$25,000 (GO TO Q. 15f)	2
REFUSED (GO TO Q. 16)	3

e. Is it above or below \$20,000 a year?

BELOW \$20,000 (GO TO Q. 16)	1
ABOVE \$20,000 (GO TO Q. 16)	2
REFUSED (GO TO Q. 16)	3

f. Is it above or below \$35,000 a year?

BELOW \$35,000	1
ABOVE \$35,000 (GO TO Q. 16)	2
REFUSED (GO TO Q. 16)	3

g. Would that be above or below \$30,000 a year?

BELOW \$30,000	1
ABOVE \$30,000	2
REFUSED	3

16. May I please have your name, in case the research  
company wants to check my work?

NAME:

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17. And your home address is:

ADDRESS:

CITY:

ZIP:

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That is all. Thank you very much for helping us.

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AFTER COMPLETING INTERVIEW, BUT BEFORE MAKING NEXT CALL, FILL OUT BELOW:

18. SEX OF RESPONDENT:

MALE..... 1

FEMALE ..... 2

19. DATE: \_\_\_\_\_

TIME INTERVIEW ENDED: \_\_\_\_\_ AM  
PM

INTERVIEW LENGTH: \_\_\_\_\_ (MIN.)

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\* The actual size of the questionnaire should be one page with the dimensions 8½" x 14". Questions 1 through 11 should be put on the front page and the remaining questions should be put on the back side of the page.





1  
2  
3  
4  
5









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